US Army Corps
of Engineers®
Walla Walla District

United States
Environmental Protection Agency
Region 10

DREDGED MATERIAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

McNary Reservoir and Lower Snake River Reservoirs

APPENDIX O
Responses to Comments on Draft DMMP/EIS

FINAL
July 2002

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13. ABSTRACT *(Maximum 200 words)*

This final Dredged Material Management Plan/Environmental Impact Statement (DMMP/EIS) presents the Corps of Engineers' programmatic plan for maintenance of the authorized navigation channel and certain publicly owned facilities in the lower Snake River reservoirs between Lewiston, Idaho and the Columbia River, and McNary reservoir on the Columbia River for 20 years; for management of dredged material from these reservoirs; and for maintenance of flow conveyance capacity at the most upstream extent of the Lower Granite reservoir for the remaining economic life of the dam and reservoir project (to year 2074). The Corps, along with the U.S. Environmental Protection Agency, analyzed four alternatives for this Final DMMP/EIS: Alternative 1 - No Action (No Change) - Maintenance Dredging With In-Water Disposal; Alternative 2 - Maintenance Dredging With In-Water Disposal to Create Fish Habitat and a 3-Foot Levee Raise; Alternative 3 - Maintenance Dredging With Upland Disposal and a 3-Foot Levee Raise; and Alternative 4 - Maintenance Dredging With Beneficial Use of Dredged Material and a 3-Foot Levee Raise (Recommended Plan/Preferred Alternative).

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dredging, dredged material, navigation maintenance, flow conveyance, inland waterway, Lower Snake River, Ice Harbor Reservoir, Lower Monumental Reservoir, Little Goose Reservoir, Lower Granite Reservoir, McNary Reservoir, Lewiston levee system

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DREDGED MATERIAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

McNARY RESERVOIR AND LOWER SNAKE RIVER RESERVOIRS

APPENDIX O

RESPONSE TO PUBLIC COMMENTS ON DRAFT DREDGED MATERIAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

U.S. Army Corps of Engineers
Walla Walla District
201 N. 3rd Avenue
Walla Walla, WA 99362

July 2002

1.0 Introduction

The Corps received comment documents (letters and e-mails) from 26 agencies, Tribes, organizations or individuals, in response to the draft DMMP/EIS.

The Corps carefully reviewed each of the comment documents to identify the specific comments and concerns raised by the public. The individual comments were noted within each document. The Corps then carefully considered each of the comments, and prepared responses to the comments. Where appropriate, the Corps revisited and/or revised the documentation, data, and/or analysis that were presented in the Draft DMMP/EIS.

Presented below are the comment documents and responses to comments received on the Draft DMMP/EIS. The individual comments are identified and numbered, and responses are presented following the letters. For the responses, comment text that was representative of the individual comments was extracted from the comment documents. In some instances, the extracted text represents only a part of the text of the comment provided in the document. Therefore, the complete documents are provided. The Corps considered the full context of each comment and has responded accordingly.

The comment documents and comment responses are organized as follows:

- Federal Agencies
  - U.S. Environmental Protection Agency, Region 10
- State Agencies
  - Idaho Department of Environmental Quality
  - Idaho Department of Fish and Game
  - Idaho State Parks and Recreation
  - Washington Department of Ecology
  - Washington Department of Fish and Wildlife
  - Washington State Department of Transportation
  - Washington State Parks and Recreation Commission
- Local Governments/Entities
  - City of Clarkston
  - City of Lewiston
  - Lewiston Parks and Recreation Department
  - Port of Clarkston
  - Port of Lewiston
- Tribes and Tribal Organizations
  - Confederated Tribes of the Umatilla Indian Reservation
  - Confederated Tribes and Bands of the Yakama Indian Nation
  - Columbia River Inter-Tribal Fisheries Commission
  - Nez Perce Tribal Executive Council
- Organizations
  - American Waterways Operators
  - Columbia Towboat Association

AQM03-06-1250

- Lewiston and Clarkston Chamber of Commerce
- Linblad Expeditions
- Shaver Transportation
- Save Our Wild Salmon Coalition

- Individuals
  - Mark Babino
  - Larry Gannon
  - Patrick Whitehall

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

January 22, 2002

Reply To
Attn Of: ECO-088

Ref: 01-084-COE

Jack Sands, Project Manager
U.S. Army Corps of Engineers
Walla Walla District
201 North 3rd Avenue
Walla Walla, Washington 99362-1876

Dear Mr. Sands:

The Environmental Protection Agency (EPA) has completed its review of the draft Environmental Impact Statement (EIS) for the proposed Dredged Material Management Plan for the McNary Reservoir and the Lower Snake River Reservoirs (CEQ No. 010434) in accordance with our authorities and responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. The draft EIS has been prepared by the U.S. Army Corps of Engineers to evaluate long-range options for maintenance of the navigation channel from Lower Granite reservoir through the McNary reservoir. The draft EIS identifies an alternative to conduct maintenance dredging in all reservoirs in the project area and disposing of the sediments in a beneficial manner as the Corps of Engineers' preferred alternative. The preferred alternative would also involve raising levees in the vicinity of Lewiston, Idaho and Clarkston, Washington.

O-1

1 We would like to voice our support of the efforts of the Walla Walla District for developing a long-term (20 year) plan for managing sediment behind the Lower Snake River dams and the McNary dam and the desire to use dredged materials in a beneficial manner. We believe that development of the plan will result in a more systematic and predictable approach to managing sediment in the project area than the present approach of dredging on a as-needed basis. Furthermore, we support the commitment to pursue a plan that would use dredged material in a beneficial manner as it would reduce the environmental effects associated with the current approach being used. We also fully endorse the establishment of a Local Sediment Management Group (LSMG) as an integral component of the development, implementation, and evaluation of the plan. We believe that using this group will result in a plan that will likely meet the needs and/or requirements of a wide range of stakeholders with an interest in how the river is managed and/or the resources that would be affected by management practices.

While we are supportive of the efforts being taken in developing the Dredged Material Management Plan (DMMP), we have some significant concerns with the currently proposed plan, as embodied in the preferred alternative, and the content of the EIS. The areas where we have major concerns are highlighted below and discussed in detail in the enclosure to this letter.

2 **Lack of a Sediment Reduction Strategy** - We are concerned that the plan does not include a strategy for reducing the input of sediment into the project area. We recommend that the DMMP/EIS be revised to include a sediment reduction strategy as an integral component.

Proposed Creation of Salmonid Habitat - Our assessment of the draft EIS leads us to conclude that the creation of more shallow-water habitat would likely result in adverse effects to aquatic

3 conditions in the project area. We recommend that the EIS be revised to support the assertion that the
See p. 2 proposed creation of habitat would benefit salmonids.

4 **Sediment Characterization** - Nutrients, manganese, total dichlorodiphenyltrichloroethane (DDT), and dioxin TEQ (toxic equivalency quotient) exceeded minimum sediment quality criteria and are considered chemicals of concern. The EIS should be revised to demonstrate that the dredged materials from behind the Lower Granite dam are suitable for in-water disposal and/or the creation of salmon habitat.

5 **Local Sediment Management Group (LSMG)** - The EIS should be revised to clearly indicate whether or not this group has been formed. We recommend that the objectives (as well as the compositions) of the LSMG be expanded to address sources of sediment and their control.

These issues, along with others that we believe need to be addressed in the EIS, are discussed in greater detail in the enclosure to this letter. Should significant new information be developed in responding to comments of the draft EIS, a supplemental draft EIS would be the appropriate mechanism for informing the public and the decision maker of alternatives to, and potential consequences of, actions to be taken by the Corps of Engineers on the proposed action.

Based on our review and evaluation, we have assigned a rating of EO-2 (Environmental Objections-Insufficient Information) to the draft EIS. This rating, and a summary of our comments, will be published in the *Federal Register*. A copy of the rating system used in conducting our review is enclosed for your reference.

We are interested in working closely with the Corps of Engineers in successfully resolving the issues we have identified. I urge you to contact Bill Ryan of my staff at (206) 553-8561 or John Malek in our Sediment Management Program (206-553-1286) at your earliest opportunity to discuss our comments and how they might best be addressed for the project.

Thank you for the opportunity to provide comments on the draft EIS.

Sincerely,

Judith Leckrone Lee

Judith Leckrone Lee, Manager
Geographic Implementation Unit

Enclosures

CONCURRENCE PAGE

Subject: Dredged Material Management Plan - McNary Reservoir and Lower Snake River Reservoirs
Draft Environmental Impact Statement

bcc: Author File
Reading File
Official File

John Malek
Dave Kalman
Don Martin
Rick Parkin
Mary Lou Soscia
Dan Opalski

Date: January 22, 2002
WordPerfect 9
File Name: f:\work\nepa\comments\water-projects\snakedredge_draftels_ltr.wpd (letter)
f:\work\nepa\comments\water-projects\snakedredge_draftels.wpd (attachment)
New Addresses:

CONCURRENCE:
SURNAME Ryan Lee
INITIALS
DATE

KEEP WITH OFFICIAL FILE COPY

O-2

EPA Comments on the
Draft Dredged Material Management Plan and Environmental Impact Statement (EIS)
McNary Reservoir and Lower Snake River Reservoirs

Sediment Reduction Strategy

The objective of developing the Dredged Material Management Plan (DMMP) is to establish a program to manage sediment in a manner that maintains navigation and flow conveyance of the Lower Granite reservoir, and defines the management strategy for dredged materials over the time horizon of the plan. As presently proposed, the DMMP would address identified sedimentation problems exclusively by dredging materials that accumulate in the project area. Flow conveyance behind the Lower Granite Dam would be addressed exclusively by raising levee heights near the confluence of the Snake and Clearwater Rivers. Both approaches are focused on the "symptom" (sedimentation) and ignore the cause(s) of the problems that the plan is attempting to alleviate. A significant omission from the currently proposed plan (and alternatives to it) is a strategy for reducing sediment inputs that ultimately affect navigation and flow conveyance in the project area. EPA believes that the plan should ultimately reflect a combination of all reasonable approaches available to reduce and control sediment, as well as methods for dredging and managing dredged materials.

See 2

The development of the DMMP provides a unique opportunity to address both the cause(s) of the problem as well as the "symptom" through the coupling of a sediment control strategy and a management strategy for dredging and the disposal of dredged materials. The U.S. Geological Survey has estimated that nearly 2.4 million tons of sediment are transported annually into the project area by the Snake and Clearwater Rivers. Reducing the amount of sediments entering the project area would result in a reduction in the amount of dredging (and associated costs and impacts) needed to maintain navigation. Reducing sediment inputs upstream of the Lower Granite Dam would also assist in maintaining flow conveyance above the dam as sedimentation would be reduced. Through the reduction of sediment inputs over the lifetime of the DMMP, we believe that the amount of materials needing to be dredged (as well as the frequency of dredging) would be reduced, as would the associated effects.

See 3

Because we believe that the reduction of sediment inputs upstream of the McNary Dam and the Lower Snake River Dams is fundamental to the success of the DMMP, we recommend that the DMMP/EIS be revised to include a sediment reduction strategy as an integral component. We recommend that the sediment reduction strategy include, at a minimum, the following components:

- Identification of the key stakeholders involved in developing the strategy
- Specific actions available for reducing sediment input
- Identification of entities responsible for implementing sediment reducing actions
- Assessment of potential sediment reductions associated with identified reduction measures/approaches
- Assessment of implications of reduced sedimentation on expected dredging volumes, frequency of dredging, and disposal approaches

Proposed Creation of Salmonid Habitat

The preferred alternative (as well as the other action alternatives) identifies the creation of salmon habitat as the primary beneficial use of dredged material. In-water beneficial disposal of dredged material in the lower Snake River reservoirs is proposed to raise mid-depth benches in the reservoirs to shallow-water benches in an attempt to create and enhance fish-rearing habitat. In this scenario, a mixture of fine material and sand would be placed in mid-water areas to raise the river bottom to create an underwater shelf about 10 feet below the final grade. The second step would be to place sand on top of the sand/silt embankment. The sand cap layer would be created with a minimum thickness of 10 feet. The final step would be to use a beam drag to flatten and level the tops of the mounds to form a flat, gently sloping shallow area.

See 3

EPA has a number of concerns with the proposed approach and the level of analyses presented to 1) support the impact characterizations presented in the EIS or 2) substantiate the claims that the creation of the shallow-water benches would benefit salmon. As presently written, we do not believe that the EIS provides sufficient information to demonstrate that the proposed "creation of salmon habitat" ultimately represents a beneficial use by providing habitat and aquatic conditions that would ultimately benefit salmon. We believe that there are a number of considerations related to the potential effects of the proposed DMMP that do not appear to have been factored into the analyses presented in the draft EIS. The EIS should be revised to more fully analyze and disclose the potential effects of the proposed DMMP, as required by the implementing regulations for NEPA (see 40 CFR 1500.1 and 1502.16).

O-3

Specifically, our assessment of the draft EIS leads us to conclude that the creation of more shallow-water habitat would likely result in adverse effects to aquatic conditions in the project area. The implementation of the proposed plan to "create fish habitat" would likely increase solar heating of the reservoirs, primary production, and result in negative direct, indirect, and cumulative impacts affecting salmonid habitat, river temperature, dissolved oxygen concentration, pH, nutrients, macroinvertebrates, and salmonid predation. These effects are discussed below.

Salmonid Habitat

Cold-water resident and anadromous species that were once common in the Columbia and Snake Rivers have declined since the construction of the dams and have been replaced by cool- and warm-water species. Species composition has changed due to the blockage of spawning migrations and modification of habitats.

Salmonid species differ in the type of habitat that they prefer. Most chinook spawn in large rivers such as the Columbia and the Snake. They tend to spawn in the mainstem of streams, where water flow is high. Because of their size, they are able to spawn in larger gravel than most other salmon. During the winter, juvenile spring chinook prefer riparian edges where vegetation has grown into the stream, providing cover and shelter. Streambanks must be covered with vegetation to provide this type of habitat, and broken or degraded streambanks do not provide suitable habitat for juvenile chinook. Juvenile

coho prefer eddies or backwaters near an undercut bank, root wad or log. In the winter they are found in deep pools or side channel areas that offer rocks, logs and debris for cover. Juvenile steelhead stay in relatively shallow, cobble-bottomed areas at the tail of a pool or shallow riffle in the first summer after hatching. In winter, they hide under large boulders in shallow riffles. Older steelhead juveniles prefer the heads of pools and riffles with large boulder substrate and woody cover in the summer. During the winter, older steelhead juveniles are found in pools, near streamside cover and under debris, logs or boulders.

6

The proposal to bury fine sediments under 10 feet of sand and dragging a beam to flatten and level the tops of the mounds to form a flat, gently sloping shallow area does not appear to be an approach that would result in the development of desirable habitat for salmonids. The smooth sand surface would provide no topographical relief. There would be no habitat for sheltering, feeding or prime lies. Sediments clog spaces between gravels and prevent water from percolating through, causing both fish and macroinvertebrate mortality.

The Riparian Habitat Subcommittee of the Oregon and Washington Interagency Committee stated that no more than 15 percent of stream substrate should be covered by inorganic sediment. The report also states that if pools are filled with sediments, rearing and sheltering habitat for juvenile salmon is reduced or eliminated. The EIS should evaluate effects of the DMMP against these criteria.

See 6

7

Bull trout have also been reported in the lower Snake River since 1991. Bull trout, also listed as threatened under the ESA, are found primarily in colder streams. Water temperature above 59° F is believed to limit bull trout distribution. Bull trout require a spawning substrate of loose, clean gravel relatively free of fine sediments."

Salmonid Predation

8

Creating more shallow-water habitat would increase warmer shallow water in all of the lower Snake River reservoirs to the detriment of cold water salmonid and to the benefit of their warm water predators. Of the current resident ichthyofauna of the reservoirs, about half are native species and half are introduced. Warm water species are generally more abundant in shallow, slower-velocity backwater areas, with native riverine species occurring in abundantly in areas with flowing water. Bass (Micropterus spp.), Crappie (Pomoxis spp.), Bluegill (Lepomis spp.), yellow perch (Perca flavescens) and carp (Cyprinus carpio) prefer low water velocity, warmer water, finer substrate, and submerged and emergent vegetation.

Of these, the most important predators of juvenile salmonids are bass, northern pike minnow, channel catfish, crapies, and yellow perch. Currently, water temperatures are below optimum throughout the growing season for all predatory "resident game fish." The implementation of the proposed plan would likely result in adverse effects to salmonids by creating better conditions for their predators.

Macroinvertebrates

Macroinvertebrates are classified into feeding guilds. These feeding guilds are substrate specific. Sand is the poorest substrate material for macroinvertebrate production, giving rise to a classification known as "burrowers". Burrowers are a poor food source for juvenile salmonids, since they are not found on the substrate or in the biological drift. These insects burrow into the substrate and create "U" shaped tunnels in the sand where they circulate water with their gills. This current that they create, serves as a conveyor of food items for the insect. As a result of this life style - of living in, rather than on, the substrate - their availability as a food source for salmonids only occurs during emergence, which occurs only once every one to three years.

9 As the draft EIS acknowledges, benthic macroinvertebrates that are commonly consumed by salmonids in the lower Snake River and McNary are associated with hard substrates. At the present time, it is the riprap that provides suitable hard substrate for macroinvertebrates and crayfish in the lower Snake River and McNary reservoirs. Covering the riprap with sand would remove this valuable habitat and its macroinvertebrates.

Temperature

10 Decreasing depth increases solar heating and stream temperatures. The lower Snake River already experiences high temperatures that also account for the elevated temperature in the mainstem of the Columbia River (including Lake Wallula behind McNary Dam).

Water temperature in the study area varies by time of the year and location. The monthly average water temperature for the months of July, August and September at the USGS gauge at Anatone in the Lewiston area, was 70.0, 71.1, and 66.2°F respectively, while the maximum daily temperatures for the months of June, July, August were 70.0, 74.8, 75.7, and 74.7°F

The EPA and the States of Idaho, Oregon, and Washington have established surface water criteria or standards for the Snake and Columbia River Basins. Each state has different thermal criteria. Idaho DEQ specifies the most restrictive criteria for salmonid spawning, with maximum water temperatures set at 55°F with daily averages no greater than 48.2°F. The present standard for Oregon allows no temperature increases in the Columbia River, outside of an assigned mixing zone, when the water temperature is at or above 68°F. When the river is 67.5°F or less, the Oregon standard dictates that no more than a 0.5°F increase is allowed due to a single source discharge. No more than a 2°F increase is allowed by all sources when the stream is 66°F or less. In Washington State, for most Class A waters, no increase over 64°F due to human activity is allowed. However, for specific Class A water classifications such as the Columbia and Snake Rivers, higher temperatures of 68°F are allowed. In the Columbia and Snake River above the confluence with the Clearwater River, no increase 0.54°F caused by human activity

can occur from a single source, or no increases over 2°F from all activities when the stream is over 68°F.

See 10 High temperature conditions during migration have contributed to outbreaks of disease and subsequent death among adults prior to spawning. High temperatures also increase the rate of development and may cause fry to emerge before the spring increase in food supplies.

Dissolved Oxygen Concentration

Dissolved oxygen concentrations are linked to temperature and flow. Dissolved oxygen values throughout the Snake River ranged from 6.4 to 13.3 ppm. In the summer months, where there is a reduced flow and increased temperature, low dissolved oxygen concentrations are found in the slack water areas of the dam forebay and sloughs. Washington Department of Ecology has listed the lower Snake River impaired by low dissolved oxygen under the provisions and pursuant to Section 303(d) of the Clean Water
11 Act. Increased water temperature caused by increased solar heating of the shallow water beaches would further diminish the already low summertime dissolved oxygen concentration, potentially resulting in fish deformities and higher fish mortality.

pH

The average pH in the upper Snake River is slightly above 8 pH units, while the lower portion of the Snake River average slightly below that value. The pH on the Columbia between the Snake River confluence and McNary dam is 8.2 pH units. The high values are attributed to the natural geological conditions and the artificial conditioning of the soil.

Most of the sediment is also very rich in nitrogenous compounds, with the dominant species of nitrogen in the sediment being ammonia. The Snake River sediments average 60 to 80 ppm of ammonia. The effects of the higher pH exacerbate the ammonia problems that are encountered in most of the sediment management areas.

12 High external un-ionized ammonia concentrations reduce or reverse diffusive gradient and cause a build up of ammonia in gill tissues of fish. Un-ionized ammonia toxicity correlates positively with temperature and hard water.

Sediment Characterization

13 EPA is concerned that sediment sampling in the Lower Granite reservoir (where the greatest amount of dredging would take place) reveals that approximately 95 percent of the sediments being deposited are fine-grained materials. Since the Snake River flows through an area dominated by agricultural use, these sediments tend to be highly enriched with organic nitrogen compounds and other nutrients. The sediments have small amounts of herbicides and pesticides, low levels of dioxin, and a few heavy metals. Nutrients, manganese, total dichlorodiphenyltrichloroethane (DDT), and dioxin TEQ (toxic equivalency quotient) exceeded minimum sediment quality criteria and are considered chemicals of concern. Based upon the

13 current information, EPA questions the feasibility of using this material for in-water disposal or the creation of salmon habitat enhancement. The EIS should be revised to demonstrate that the dredged materials from behind the Lower Granite dam are suitable for in-water disposal and/or the creation of salmon habitat.

Local Sediment Management Group

The draft EIS is not clear as to whether the Local Sediment Management Group (LSMG) has already been formed or whether it is yet to be formed. Much of the discussion in the EIS suggests that the LSMG has not yet been formed, yet states that the group has provided input into the development of the DMMP. The EIS should be revised to clearly indicate whether or not this
14 group has been formed. If the LSMG has been formed, the EIS should identify the members of the group and present a summary of the input they have provided to the development of the plan. If it has not been formed, we recommend that the Corps convene the LSMG and utilize their input in the further development of the plan.

We see the establishment and operation the LSMG as a critical component of a successful strategy for managing sediment in the project area and strongly support its formation. Based on discussion in the draft EIS, it appears that the present direction of the group is focused on dredging and sediment management issues/activities. An equal, if not more important, consideration in meeting the project purpose and need to develop a program that maintains the authorized navigation channel and flow conveyance of the Lower Granite reservoir relates to reducing the amount of sediment being introduced into the Clearwater and Snake Rivers.
15 Consequently, we recommend that the objectives of the LSMG be expanded to address sources of sediment and their control. We also recommend that membership of the LSMG be expanded to include agencies/entities that have jurisdiction and/or are capable of influencing activities and practices that contribute significantly to sediment inputs into the Snake and Clearwater Rivers. This will allow for the identification and evaluation of opportunities for controlling sediment inputs at their source and thereby reduce the amount of materials that would need to be dredged and disposed of.

16 The EIS should expand the discussion of the LSMG to include a description of the group's role in decision-making processes by the Corps (or others) associated with managing sediment in the project area. It is not clear what types of decisions would be made or by whom, nor is the role of the LSMG clearly defined with respect to those decisions. This should be explained in the EIS.

The presently proposed plan seems to rely heavily on an adaptive management approach to sediment issues in the Lower Snake river and behind the McNary Dam. A critical element in
17 any successful adaptive management strategy is the design, implementation, and interpretation of an effective, well designed monitoring plan. We recommend the monitoring plan for the DMMP be designed with the active involvement of the LSMG. With implementation of the DMMP, the LSMG should also have a role in the implementation and interpretation of the results of monitoring conducted. This will ensure that appropriate adjustments to the plan can be made (if deemed necessary), based on a broad-based evaluation of the monitoring results.

O-5

Monitoring Plan

A critical element in any successful adaptive management strategy is the design, implementation, and interpretation of an effective, well designed monitoring plan. We are
18 concerned that the monitoring plan was not presented for public review in the draft EIS as the success of the DMMP will rely heavily on the manner in which plan performance is monitored. We believe that providing the public with an opportunity to assist in developing and refining the monitoring component of the plan ultimately results in a better plan. We recommend that the monitoring plan be included in the EIS and it should include a public involvement component to afford the public an opportunity to help shape the plan.

Alternatives Eliminated from Detailed Review

19 In general, we have concerns that two project alternatives have been eliminated from detailed consideration and evaluation because they do not represent complete, stand-alone solutions to the sedimentation problems in the project area. As the proposed management plan is intended to set forth a program to manage sediment in a manner that maintains navigation, flow conveyance of the Lower Granite reservoir, and defines the management strategy for dredged materials over the time horizon of the plan, we believe that the plan should ultimately reflect a combination of all reasonable approaches available to reduce and control sediment, as well as methods for dredging and managing dredged materials. Section 2 of the draft EIS indicates that changing land use practices upstream of Lower Granite Dam would reduce sedimentation and, thus, reduce the need for dredging and disposal of dredged materials. The EIS also indicates that the use of beadaway weirs represents an environmentally sensitive approach for reducing streambank erosion and maintenance costs. Both of these alternatives have been eliminated because they either do not represent a complete solution (the "land use" alternative) or are not practical or feasible for the entire project (bendaway weirs). EPA does not believe that the draft EIS presents sufficient information/analyses to support the elimination of these approaches from detailed evaluation. Our concerns with eliminating these options are presented below.

Change Upstream Land Uses and Land Management Practices to Control Sediment

20 While we agree that changing upstream land uses is "not a complete solution to maintain navigation," we believe that evaluating this critical component is a necessary part of the development of a plan to successfully and effectively maintain the authorized navigation channel and flow conveyance of the Lower Granite reservoir. Consequently, the evaluation of options for reducing sedimentation should be evaluated as an integral component of all alternatives in the EIS. As shown in Table 1-1, materials dredged from the Lower Granite reservoir account for roughly 76 percent of the total volumes dredged in the project area between 1977 and 1999. This indicates that reducing sediment inputs into the Clearwater and Snake Rivers upstream of the confluence (thereby reducing the need to dredge) is critical to managing navigation and flow conveyance of the Lower Granite reservoir, two primary objectives of the management plan. Based on information presented in the draft EIS, control of sediment from non-irrigated cropland alone could potentially reduce the amount sediment transported in the Lower Granite reservoir by roughly 37 percent (approximately 880,000 ton/year). Given the potential to significantly

reduce sediment inputs into the Lower Granite reservoir (and the associated need to dredge), we recommend that the EIS be revised to include an evaluation of potential changes to upstream land use practices as they relate to controlling sediment.

Use of Bendaway Weirs

The draft EIS suggests that the use of bendaway weirs in specific locations could provide an environmentally sensitive method of reducing streambank erosion and redirect sediment flow to reduce maintenance (dredging) costs, yet this approach appears to have been rejected from further consideration because additional analysis would be required before determining its feasibility. We believe an evaluation of potential locations for the
21 use of bendaway weirs (along with necessary analyses/modeling) should be conducted as part of the development of the proposed management plan as the use of the weirs could potentially reduce the need to dredge and dispose of dredged materials. The use of this technology, if found to be feasible, should be used in combination with dredging and the control of sediment sources to improve the effectiveness of the proposed management plan.

Beneficial Uses of Dredged Material

We fully support the development of a Dredged Material Management Plan (DMMP) that employs a strategy of disposing of dredged material in a beneficial manner. To achieve that
22 goal, we recommend that the proposed DMMP and EIS be revised to more clearly describe the manner in which the presently preferred alternative (Alternative 4) would be implemented and demonstrate that the beneficial uses identified are indeed beneficial (particularly the creation of salmon habitat). Section 2 of the draft EIS describes as number of beneficial uses that would or could be pursued with the implementation of Alternative 4, but there is little discussion of the process that would be used to determine whether potential beneficial uses would be implemented and how relative priorities would be determined should there be "competing" beneficial uses. Section 2.8.5.1 presents a very brief description of the presently-proposed process which we believe lacks a critical component; a discussion of the role of the LSMG in developing, evaluating, and ultimately advising the Corps about selection and implementation of the beneficial uses. The role of the LSMG should be described in the EIS as it relates to the critical function of determinating and implementing beneficial uses.

Conducting Dredging and Disposal Operations during Fish Windows

23 Information exists that indicates salmonids are in the Lower Snake River year-round. As a consequence, statements in the EIS that impacts would be negligible because work would be conducted during windows when salmon would not be around do not appear to be supported. We recommend that the EIS be revised to discuss this issue and include additional discussion/analysis to support the conclusion that impacts to salmon would be negligible.

Baseline Water Quality Information

24 We are concerned with the lack of information, or reliance on very old data (circa 1973), used to characterize current (baseline) water quality conditions in the draft EIS. In order to develop meaningful evaluations of potential effects to water quality/aquatic resources from the

O-6

24 cont. proposed activities (in this case, sediment management, dredging and disposal), it is critically important to establish current baseline conditions. We are particularly concerned that the approach proposed to be taken to address these data deficiencies has been deferred until dredging activities have been scheduled or are already underway.

Because an understanding of current conditions and predicted effects are required to develop a meaningful strategy for managing dredged material, we recommend that current baseline information related to nutrients, toxic substances and salinity/conductivity in Lake Wallula and salinity/conductivity and toxic substances upstream of the Lower Granite dam be gathered and presented in the EIS. Additionally, continued reliance on the 1973 Water Quality Report (or other dated references) should be accompanied with a discussion of how the data contained in the report are relevant and applicable to the current situation. This is critically important when the data reported are nearly 30 years old and were gathered before all the dams in the project area were in place and operating.

25 **Government-to-Government Consultation with Tribes**

The draft EIS provides little evidence that required government-to-government consultations with affected Tribes have been conducted. Further development of the plan and EIS should be conducted in consultation with the governing bodies of affected Tribes, consistent with EO 13175 (*Consultation and Coordination with Indian Tribal Governments*) which states that the U.S. government will continue "to work with Indian tribes on a government-to-government basis to address issues concerning Indian tribal self-government, trust resources, and Indian tribal treaty and other rights." The results of consultation and coordination with affected Tribal governments should be documented and reported in the EIS.

26 **Environmental Justice Analysis**

While Section 5.25 of the draft EIS presents a very general discussion of Executive Order (EO) 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*) and the proposed plan, the EIS presents no evidence that the necessary analyses have been conducted. Identification of potential impacts and mitigation measures, developed in consultation with affected minority and/or low income populations, must be included in the EIS to meet the direction of EO 12898 and the accompanying memorandum from President Clinton to the heads of all Departments and Agencies. The Environmental Justice analysis presented in the EIS should include the following three major components:

Identification (including maps) of all low income and people of color communities in the area that would be impacted by the proposed project
This should include a description of the methodology and criteria utilized for identifying the low income and people of color communities, the sources of data utilized for these analyses, and references utilized for establishing the criteria. Note: If 1990 U.S. Census data are utilized, the EIS needs to discuss any short falls that may result from utilizing this data set, and/or what steps were taken to assure the data is still appropriate for 2002 analyses.

26 cont.

Comprehensive accounting of all the impacts on low income and people of color
The identification of impacts needs to include (and not limited to) cumulative and indirect impacts, exposure pathways unique to the impacted communities, historic exposures, and impacts to cultural, historic and protected resources. In addition, the EIS needs to determine if the impacts on the low income and people of color communities would be disproportionately higher those impacts on non-low income and non-people of color communities. For such a determination, the EIS must identify a reference community and provide a justification for utilizing this reference community. This justification should include a discussion of the methodology for selecting the reference community.

Identification of disproportionately high and adverse effects to the low income and people of color communities
The EIS must identify whether any disproportionately high and adverse to low income and people of color communities would result from the project. If so, the EIS should demonstrate that communities bearing disproportionately high and adverse effects have had meaningful input into the decisions being made about the project. The EIS needs to provide a discussion on what was done to receive input from the affected communities (notices, mailings, fact sheets, briefings, presentation, exhibits, tours, news releases, translations, newsletters, reports, community interviews, surveys, canvassing, telephone hotlines, question and answer sessions, stakeholder meetings, and on scene information), what the input was, and how that input was utilized to shape the final outcome of the project. This discussion should include how input from affected communities was utilized, what mitigation measures will be put in place to address those concerns, and what steps were taken to assure that concerns of individuals are being addressed, not just those of the governmental entities.

O-7

U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - - Lack of Objections

The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - - Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussion are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and that should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment, February, 1987.

Organization
U.S. Environmental Protection Agency
Comment 1
We would like to voice our support of the efforts of the Walla Walla District for developing a long-term (20 year) plan for managing sediment behind the Lower Snake River dams and the McNary dam and the desire to use dredged materials in a beneficial manner. We believe that the development of the plan will result in a more systematic and predictable approach to managing sediment in the project area than the present approach of dredging on a as-needed basis. Furthermore, we support the commitment to pursue a plan that would use dredged material in a beneficial manner as it would reduce the environmental effects associated with the current approach being used. We also fully endorse the establishment of a Local Sediment Management Group (LSMG) as an integral component of the development, implementation, and evaluation of the plan. We believe that using this group will result in a plan that will likely meet the needs and/or requirements of a wide range of stakeholders with an interest in how the river is managed and/or the resources that would be affected by management practices.
Response
Your comment is noted.

Organization
U.S. Environmental Protection Agency
Comment 2
Lack of a Sediment Reduction Strategy - We are concerned that the plan does not include a strategy for reducing the input of sediment into the project area.. . . . A significant omission from the currently proposed plan (and alternatives to it) is a strategy for reducing sediment inputs that ultimately affect navigation and flow conveyance in the project area. EPA believes that the plan should ultimately reflect a combination of all reasonable approaches available to reduce and control sediment, as well as methods for dredging and managing dredged materials. . . . [W]e recommend that the DMMP/EIS be revised to include a sediment reduction strategy as an integral component.
Response
Non-dredging or reduced dredging alternatives, including sediment reduction strategies, were considered in development of the DMMP/EIS (see Sections 2.2.1 – 2.2.3). Section 1.8 has been expanded to discuss the role of the Local Sediment Management Group in evaluating and identifying possible changes in upstream land management to reduce erosion and sedimentation.

Organization
U.S. Environmental Protection Agency
Comment 3
Proposed Creation of Salmonid Habitat - Our assessment of the draft EIS leads us to conclude that the creation of more shallow-water habitat would likely result in adverse effects to aquatic conditions in the project area. We recommend that the EIS be revised to support the assertion that the proposed creation of habitat would benefit salmonids.
Response
The primary emphasis of the habitat creation is for fall chinook, which spawn and rear in the mainstem Snake River prior to outmigrating, typically within the same calendar year of emergence.

Although the proposal to create shallow water salmonid habitat may not "appear" to develop habitat for salmonids, numerous scientists from federal, state, university and tribal agencies set up the study design in 1987 to ensure it evaluated the effectiveness of habitat creation. These agencies included the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, National Marine Fisheries Service, ESSA, Battelle-PNNL, Washington Department of Fisheries, Oregon Department of Fish and Wildlife, University of Idaho, University of Washington, Oregon State University, and the Yakama Indian Nation. The researcher involved with many of the studies was David Bennett, Ph.D., a tenured professor at the University of Idaho. With a multiple year study design, a lead researcher who was a recognized expert in the field , and a study design from the regions leading experts, we believe that the science supports our claims. (See Sections 3 and 4 of the DMMP for details.)

The current status of the Snake RiverReservoirs provides little variation in habitat along the shorelines, the areas most frequently used by fall chinook salmon. The building of sandy shallow water benches, which were formerly quite prevalent in the lower Snake River as determined by examining aerial photos taken pre-impoundment, provides habitat diversity to what currently is primarily a single habitat type in the Lower Granite Reservoir. Typically, biologists believe that riprap, although providing substrate for some species of invertebrates for a few weeks out of the year, is a non-preferred habitat for salmonid species. Garland et al 2001 indicated juvenile fall chinook were consistently sampled at much higher rates over natural habitat (including sand) than around riprap in the mainstem Columbia. In addition, researchers have consistently captured subyearling chinook salmon over sandy habitat in the unimpounded section of the Lower Snake River upstream from Lower Granite Reservoir and in Lower Granite Reservoir (Bennett et al 1995).

On page 2 of the enclosure to your letter, "Salmonid Habitat" paragraph 2, you state "most chinook salmon spawn in large rivers such as the Columbia and the Snake". However, no known populations of spring or summer chinook have ever been found spawning in the lower Snake and Columbia rivers, and there is no historic evidence that indicates that this has ever been the case. Although large numbers of fall chinook typically spawn in the mainstem of these rivers, numbers fluctuate from year to year as to which run is largest, especially within the Snake River. Nearly all of the areas proposed for dredging in the lower Snake River or McNary Reservoir have no habitat for spawning salmon due to velocity and substrate restrictions. In addition, most of the spawning habitat for fall chinook occurred upstream of the Hells Canyon complex of dams and not downstream in the lower river. Areas that do have fall chinook spawning habitat include the tailraces of the dams where velocities are sufficient to keep gravels and cobbles clean for use as spawning material. However, all of these areas, with the exception of Ice Harbor, are in the areas of higher velocities, such as in front of the powerhouses of the dams, and dredging is proposed in the slower water on the far side of the channel where no fish have ever been documented spawning despite numerous years of looking (Dauble et al 1998).

In the same paragraph, you also state, "during the winter, juvenile spring chinook prefer riparian edges where vegetation has grown into the stream, providing cover and shelter." This may be true in smaller, shallower tributaries. However, because of the historic hydrograph of the Snake and Columbia rivers, the lowest water surface elevations occur in the winter and, therefore, riparian areas were/are typically farther away from the water's edge than can be used by juvenile salmon during that time of year.

Organization

U.S. Environmental Protection Agency
Comment 4
Sediment Characterization - Nutrients, manganese, total DDT, and dioxin TEQ exceeded minimum sediment quality criteria and are considered chemicals of concern. The EIS should be revised to demonstrate that the dredged materials from behind the Lower Granite dam are suitable for in-water disposal and/or the creation of salmon habitat.
Response
Section 3.9.2 has been revised to more accurately reflect sediment quality as potentially affected by dredging, as well as the suitability of dredged materials for in-water disposal, creation of salmon habitat, and/or beneficial uses.

Some of the sediment quality information presented in the Draft DMMP/EIS referenced sediment analysis for the Lower Snake River Juvenile Salmon Migration Feasibility Study and EIS (Feasibility Study), which evaluated sediments with respect to a very different proposed action from that considered in the DMMP. The Feasibility Study examined sediments from locations throughout the lower Snake River system that may have been affected by dam breaching, which would be much more far-reaching in terms of sediment transport and disturbance than the navigation maintenance examined in the DMMP. Further, the sediment analysis for the DMMP, as documented in Sections 3.9.2.4 and 4.9 of the Final DMMP/EIS, is focused on available sediment data from areas that may be dredged in the next 20 years to maintain the authorized navigation channel. Historical sediment data from the navigation channel indicate no sediment contaminant issues would be likely.

Prior to any dredging, the proposed areas will be sampled and analyzed per the guidance of a dredged material evaluation framework. Until a framework specifically for the lower Snake and mid-Columbia rivers is completed, the Lower Columbia River Management Area Dredged Material Evaluation Framework will be used. The results of these analyses will evaluate the potential effects on salmonids and other potentially affected species and, if dredging is to be done, it will help determine the dredging methodology, amount and type of monitoring needed during dredging, and where the excavated materials will be relocated to, either in-water or on land.

Further, analysis prior to dredging will include chemical analysis to identify contaminants if they exist within the sediments to be dredged. The collection and analysis of sediment samples will be done in accordance with an approved Sampling and Analysis Plan that is designed to provide an high probability that significant amounts of toxic materials will be identified prior to the start of dredging operations. A monitoring plan has been developed, and is included with the Final DMMP EIS as Appendix M. Monitoring during dredging will assess whether unacceptable amounts of sediment movement may occur during dredging operations and whether the work will be stopped and/or modified to provide additional controls or limit the extent of sediment plumes in the river. While the Corps' intent is to test the sediment and avoid reintroduction of any toxic materials into the water column, monitoring will be used to limit the extent of impacts from the reintroduction of toxic materials if an unknown hot spot is encountered during dredging.

Organization
U.S. Environmental Protection Agency
Comment 5
LSMG - The EIS should be revised to clearly indicate whether or not this group has been formed. We recommend that the objectives (as well as the compositions) of the LSMG be expanded to address sources of sediment and their control.
Response
The Local Sediment Management Group (LSMG) has been formed (see Section 1.8). Portions of the section have been modified to better reflect that the group does exist and has held several meetings. The section has also been expanded to discuss the role of the LSMG in addressing changes in upstream land management to reduce erosion and sedimentation.

Organization
U.S. Environmental Protection Agency
Comment 6
The approach to create salmonid habitat using dredged materials would probably not result in development of desirable habitat for salmonids. The smooth surface would provide no topographic relief. There would be no habitat for sheltering, feeding or prime lies. Sediments clog spaces between gravels and prevent water from percolating through, causing both fish and macroinvertebrate mortality. The Riparian Habitat Subcommittee of the Oregon and Washington Interagency committee stated that no more than 15 percent of stream substrate should be covered by inorganic sediment. The report also states that if pools are filled with sediment, rearing and sheltering habitat for juvenile salmon is reduced or eliminated. The EIS should evaluate the effects of the DMMP against these criteria.
Response
Although sediments can prevent water percolation through gravels, there is no gravel where we are proposing to dispose of material. We are planning to dispose in areas where there is currently only silt, leaving a more productive area of sand for fish habitat, a significant improvement to what is currently there. Currently, the Lower Granite Reservoir is composed of primarily silt in the lower reaches near Lower Granite Dam. Creating habitat diversity by creating new underwater benches would benefit salmonid species, primarily fall chinook. In addition, the Woody Riparian program within the Corps has potential needs for sedimentary material for creating/enhancing riparian areas along the Lower Snake River. This could be considered a beneficial use outside of directly creating in water habitat. The Corps of Engineers believes that creating the shallow water sand bars along the shorelines is an improvement to the juvenile salmonid habitat that is currently in the lower Snake River including Lower Granite Reservoir. The Bennett et al. 1995a report on created habitat indicated that fall chinook prefer areas of open, sandy substrate that did not have hiding places for predators.

Organization
U.S. Environmental Protection Agency
Comment 7
Bull trout have also been reported in the lower Snake River since 1991. Bull trout, also listed as threatened under the ESA, are found primarily in colder streams. Water temperature above 59° F is believed to limit bull trout distribution. Bull trout require a spawning substrate of loose, clean gravel relatively free from fine sediments.
Response
Although bull trout have been documented in the lower Snake River, there is no evidence of them using the river during the summer months when the water temperature is warmer. In addition, bull trout spawn in August and September, a period when temperatures would have exceeded 59°F even before the hydrosystem was in place. Evidence suggests that adfluvial (migratory) bull trout from the Tucannon River also utilize the mainstem Snake River on a seasonal basis

(November – May). These fish most likely forage in shallow areas where the majority of prey exists. Thus, even though bull trout may be present in the river during times of dredging, they would be using portions of the river that would not be impacted by the dredging operation. The current proposed disposal of dredged material at Chief Timothy HMU has the remote chance of displacing bull trout; but due to the distance to the Tucannon River from this site, this possibility is very remote.

Organization
U.S. Environmental Protection Agency
Comment 8
Creating more shallow-water habitat would increase warmer shallower water in all of the lower Snake River reservoirs to the detriment of cold water salmonid and to the benefit of their warm water predators. The implementation of the proposed plan would likely result in adverse effects to salmonids by creating better conditions for their predators.
Response
The research by Bennett et al (1995a) demonstrated that predators were not concentrated around these habitat areas created at Centennial Island and were actually found in fewer numbers at the Centennial Island Site than at the modified reference sites. However, predators were encountered around the areas where larger substrate that was put in place to stabilize the island on the riverside. The Corps is not currently proposing building islands at the proposed disposal sites. In addition, predators are thought to use areas of higher relief, which is why the habitat areas are proposed for smoothing. Bennett et al 1995a reported one of the reasons juvenile fall chinook appear to use the area is they prefer the open sand habitat because there is no hiding places for predators.

Organization
U.S. Environmental Protection Agency
Comment 9
As the draft EIS acknowledges, benthic macroinvertebrates that are commonly consumed by salmonids in the lower Snake River and McNary are associated with hard substrates. Covering the riprap with sand would remove this valuable habitat and its macroinvertebrates
Response
Although Bennett (1995a) reported that much of the ephemeropterans and other invertebrates are produced more so on the rocky substrates, Tiffan et. al. 2001 reported that juvenile salmon do not use these habitats. Other agencies have actually suggested covering riprap to establish riparian zones.

Curet 1993 performed a diet analysis of fall chinook in the Lower Granite and Little Goose reservoirs and fall chinook were not typically found to consume oligochaetes. He determined fall chinook were eating Cladocerans (daphnia) and dipterans in high numbers. Bennett 1995a determined most zooplankton was collected over shallow water habitats and that Cladocerans were in the highest densities at these locations. Because these shallow water areas may have lower velocities, the residence time of zooplankton over the proposed shallow water habitat should be increased, increasing their vulnerability to fall chinook. In addition, although some riprap may eventually be covered by dredged material in favor of creating riparian habitat, not all of the riprap would be covered and most of the overall hard substrate in the lower Snake River would continue to have the ability to produce insects.

Organization
U.S. Environmental Protection Agency
Comment 10
Decreasing depth increases solar heating and stream temperatures. . . High temperature conditions during migration have contributed to outbreaks of disease and subsequent death among adults prior to spawning. High temperatures dso increase the rate of development and may cause fry to emerge before the spring increase in food supplies.
Response
The thought that high temperatures in the lower Snake River harm "fry" salmonids is unsubstantiated and incorrect. The only areas within the Lower Snake River Project where fry emerge from the gravel may be in the Hells Canyon Reach and downstream of the dams in the tailrace areas. However, fall chinook typically emerge as fry in March and April, a period where water temperature is not a problem. As most fish outmigrate within the first year as subyearlings, the warmer shoreline temperatures actually serve to trigger outmigration. In addition, in 2001, a low flow year, the water temperature did not reach 20°C until July 2, when over 93% of the total smolt outmigration had already passed Lower Granite Dam, as evidenced by the Smolt Index from the Fish Passage Center, Portland Oregon, (99% of Yearling Chinook, 92% of Sockeye, 98% of Steelhead, 72% of Coho, and 45% of fall chinook). Twenty degrees Celsius is a temperature at which most scientists stop handling fish to avoid additional stress induced mortality.

Although increased temperatures may cause health problems in fish, the maximum total surface area of the habitats proposed over the 20-year life of the project amounts to less than 3% of the total surface acreage of Lower Granite Reservoir (246 acres/8900 acres) and would effect less than 0.8% of the total volume of the reservoir (considering an average 15 foot depth x 246 acres/ 483,800 acre feet). This small amount of influence, combined with the increased depth in the confluence area, and considering the amount of water exchange occurring in the reservoir, would not impact the temperatures very much.

The benefits to fall chinook, however, of having these small areas where the temperatures may be slightly higher than the rest of the reservoir, includes greater food production, increased growth rates, and increased overall survivability through the hydrosystem on their downstream migration.

Data quoted from the Anatone United States Geological Survey (USGS) Gage indicates that high water temperatures are a problem prior to approaching the area impounded by the Lower Snake River dams. Since Anatone USGS Gage exists over 20 miles from the influence of Lower Granite Reservoir, the correlation with high temperature and the effect of the Lower Snake Project is unclear. It appears that the overriding factor of temperature in the Lower Snake project is not caused by the dams, but is caused by upstream influences which are currently not being addressed (see the Feasibility Study EIS, Appendix C, Section 3, page 17).

Organization
U.S. Environmental Protection Agency
Comment 11
Increased water temperature caused by increasedsolar heating of the shallow water benches would further diminish the already low summertime dissolved oxygen concentration, potentially

resulting in fish deformities and higher fish mortality.
Response
See response to comment 10 above.

Organization
U.S. Environmental Protection Agency
Comment 12
High external un-ionized ammonia concentrations reduce or reverse diffusive gradient and cause a build up of ammonia in gill tissues of fish. Un-ionized ammonia toxicity correlates positively with temperature and hard water.
Response
Most of the sediments that would be dredged are anticipated to be sand and, therefore, would be unlikely to be "rich in nitrogenous compounds." Further, most dredging and dredged material management would occur in December – March, when water temperatures are low. Both of these factors reduce the risk of ammonia being released into the water column during proposed dredging and dredged material management activities.

The Dredged Material Evaluation Framework provides specific guidance and procedures for evaluating dredged materials and their potential effects on water quality and aquatic biota. The Corps is in the process of developing a specific framework for the project area. However, until a Lower Snake/Mid-Columbia framework is finalized, the Corps will use applicable elements of the Lower Columbia Dredged Material Evaluation Framework. The Corps will use the framework to determine if water quality-related impacts to fish, such as those cited in the comment, would potentially occur as a result of proposed dredging. Section 3.9 of the DMMP/EIS provides a summary description of how the framework will be utilized by the Corps, and an outline for the proposed framework is included in Appendix J of the DMMP/EIS.

Organization
U.S. Environmental Protection Agency
Comment 13
EPA is concerned that sediment sampling in the Lower Granite reservoir (where the greatest amount of dredging would take place) reveals that approximately 95 percent of the sediments being deposited are fine-grained materials. EPA questions the feasibility of using this material for in-water disposal or the creation of salmon habitat enhancement. The EIS should be revised to demonstrate that the dredged materials from behind the Lower Granite dam are suitable for in-water disposal and/or the creation of salmon habitat.
Response
The Corps is not proposing to dredge all of the sediments that deposit in Lower Granite Reservoir. The Corps is only proposing to dredge material that has deposited within the navigation channel, port facilities, recreation facilities, and irrigation intakes. The majority of the dredged material is removed from the main navigation channel and comparatively little is removed from ports, shorelines, and boat basins. (For example, in 2002-2003 the Corps proposes to remove about 250,500 cubic yards from the Federal navigation channel at the confluence of the Snake and Clearwater rivers and 24,000 cubic yards of cobbles from the navigation lock approaches, but only about 44,700 cubic yards from ports and recreation facilities combined.) Section 2.2.5 does state that approximately 95 percent of the sediments being deposited in Lower Granite reservoir are fine-grained. However, Section 2.2.5 also states that the material dredged

from the navigation channel in Lower Granite is 85 percent sand, gravel, and cobble and 15 percent finer silt material. The section goes on to state that the silt entering the reservoir does not contribute significantly to shoaling of navigation channels and that the silt is either deposited in other portions of the reservoir or relocated by prop wash, thereby eliminating it from the navigation channels. In addition, Section 3.9.2.2 states that most sediment samples taken for previous dredging operations have contained between 85 and 90 percent sand and that these are indicative of what might be dredged from the main navigation channel. The section also states that composition of materials dredged from port areas, close to streambanks, and in boat basins is expected to contain up to 50 percent silt and fines. Therefore, the majority of the material that would be dredged would be sand and not fine-grained material.

See response to Comment 4 above. Figure ES-4 of the Draft DMMP/EIS illustrates the process that considers the grain size of dredged materials as they relate to material management options. This decision tree directs sediments that are greater than 30 percent fines to upland disposal areas if there is not enough sand available from other dredging sites to form a mix of 70 percent sand and 30 percent silt. However, sediment data from the areas that would potentially be dredged in Lower Granite Reservoir (i.e., the navigation channel) indicate that silts comprise less than 30 percent of these sediments.

Also see responses to Columbia River Intertribal Fish Commission's comment 21, and Save our Wild Salmon's comment 16.

Organization
U.S. Environmental Protection Agency
Comment 14
The EIS should be revised to clearly indicate whether or not this group has been formed. If the LSMG has been formed, the EIS should identify the members of the group and present a summary of the input they have provided to the development of the plan. If it has not been formed, we recommend that the Corps convene the LSMG and utilize their input in the further development of the plan.
Response
Sections 1.8 and 6.2 state that the LSMG has been formed. Section 1.8 has been revised to more clearly indicate that the group has been formed and has had several meetings. This section has also been revised to include an expanded list of participants. Section 6.2 summarizes what was discussed at the LSMG meetings that have been held to date.

Organization
U.S. Environmental Protection Agency
Comment 15
We recommend that the objectives of the LSMG be expanded to address sources of sediment and their control. We also recommend that membership of the LSMG be expanded to include agencies/entities that have jurisdiction and/or are capable of influencing activities and practices that contribute significantly to sediment inputs into the Snake and Clearwater Rivers.
Response
Section 1.8 has been revised to show an expanded list of participants in the LSMG. This section has also been revised to indicate the LSMG will address sediment input from upstream sources.

Organization
U.S. Environmental Protection Agency
Comment 16
The EIS should expand the discussion of the LSMG to include a description of the group's role in decision-making processes by the Corps (or others) associated with managing sediment in the project area.
Response
Section 1.8 has been revised to better describe the role of the LSMG in the DMMP and dredging activities.

Organization
U.S. Environmental Protection Agency
Comment 17
A critical element in any successful adaptive management strategy is the design, implementation, and interpretation of an effective, well designed monitoring plan. We recommend the monitoring plan for the DMMP be designed with the active involvement of the LSMG.
Response
The Monitoring Plan is presented in Appendix M of the Final DMMP/EIS. Because the DMMP is a long-term plan that proposes an adaptive management approach to dredged material management, the Monitoring Plan will, of necessity, be a "living document" that provides the flexibility to change over time. The Corps will consider public comments on the Monitoring Plan received through the NEPA process, and will work with the LSMG to adapt the Monitoring Plan over time.

Organization
U.S. Environmental Protection Agency
Comment 18
We are concerned that the monitoring plan was not presented for public review in the draft EIS as the success of the DMMP will rely heavily on the manner in which plan performance is monitored. We recommend that the monitoring plan be included in the EIS and it should include a public involvement component to afford the public and opportunity to help shape the plan.
Response
The monitoring program is included in the Final DMMP/EIS as Appendix M, The Final DMMP/EIS has been distributed for public review.

Organization
U.S. Environmental Protection Agency
Comment 19
In general, we have concerns that two project alternatives have been eliminated from detailed consideration and evaluation because they do not represent complete, stand-alone solutions to the sedimentation problems in the project area.
Response
In keeping with the requirements of NEPA, the Corps identified and evaluated a broad range of

alternatives that may fulfill the program's purpose and need. Several alternatives were evaluated and eliminated for not fulfilling the purpose and need (see Section 2.2. of the DMMP/EIS) and not providing a comprehensive solution to sedimentation and navigation maintenance within the study area.

Explanations of why the two specific alternatives referenced in the comment were eliminated as major components of any program alternative are provided in the DMMP/EIS and in the responses to Comments 20 and 21, below.

However, as the Corps identifies locations where sediments are accumulating and may require dredging, potential non-dredging solutions will be evaluated. While measures to control upstream sediment sources and bendway weirs do not represent substantial, complete, or, in many cases, feasible stand-alone solutions to the issues addressed in the DMMP, the proposed adaptive management program provides an opportunity for on-going evaluation of these and other measures to address sedimentation and dredged material management issues.

Organization
U.S. Environmental Protection Agency
Comment 20
While we agree that changing upstream land uses is "not a complete solution to maintain navigation," we believe that evaluating this critical component is a necessary part of the development of a plan to successfully and effectively maintain the authorized navigation channel and flow conveyance of the Lower Granite reservoir.
Response
As noted in the DMMP/EIS, the authority of the Corps of Engineers to substantially affect upstream sediment inputs to the lower Snake River system is limited. However, opportunities are afforded through the DMMP process, and in particular through the LSMG, to evaluate and identify regional sediment management issues including upstream land uses and sediment sources. In particular, the LSMG will be expanded to include representatives of agencies that are directly involved in upstream land management, such as the U.S. Forest Service and the Natural Resources Conservation Service. Furthermore, bendway weirs or other appropriate non-dredging technologies may be considered at other locations to address sediment reduction on a case-by-case basis. The Corps and LSMG may evaluate use of such a technologies in the future, within the framework provided by the DMMP.

Organization
U.S. Environmental Protection Agency
Comment 21
We believe an evaluation of potential locations for the use of bendway weirs (along with necessary analyses/modeling) should be conducted as part of the development of the proposed management plan as the use of weirs could potentially reduce the need to dredge and dispose of dredged materials.
Response
In-water structures such as bendway weirs have been looked at in the past and were evaluated as part of the development of the DMMP (See Section 2.2.3.2 of the DMMP/EIS) Structures like bendway weirs can increase water velocity and impact flow direction, but sediments will accumulate behind them. Specifically, bendway weirs would not be appropriate in the

Lewiston/Clarkston area since they would raise the water surface during high flows and cause overtopping of the levees. Both keeping the navigation channel clear and keeping the high flow water surface level down are the goals of the plan.

Bendway weirs may be appropriate in other areas where water surface elevation isn't as critical as at Lewiston (See response to Comment 19 above). Bendway weirs or other appropriate non-dredging technologies may be considered at other locations to address limited sedimentation on a case-by-case basis. The Corps and LSMG may evaluate use of such a technologies in future, within the framework provided by the DMMP.

Organization
U.S. Environmental Protection Agency
Comment 22
We recommend that the proposed DMMP and EIS be revised to more clearly describe the manner in which the presently preferred alternative (Alternative 4) would be implemented and demonstrate that the beneficial uses identified are indeed beneficial (particularly the creation of salmon habitat).
Response
The description of the Corps' efforts to identify, evaluate, and implement beneficial uses in Section 2.5.4 of the DMMP/EIS has been revised to provide greater detail, as noted in the comment. The Corps' Engineer Manual 1110-2-5 provides guidance on beneficial uses of dredged material.

In general, identified beneficial uses will be evaluated based on a number of factors. When more than one potential beneficial use has been identified and determined to be feasible, the uses will be compared based on cost-effectiveness, likely participation of a non-Federal sponsor, and incremental analyses to compare the alternatives' environmental benefits per unit cost.

Organization
U.S. Environmental Protection Agency
Comment 23
Information exists that indicates salmonids are in the lower Snake River year-round. As a consequence, statements in the EIS that impacts would be negligible because work would be conducted during windows when salmon would not be around do not appear to be supported. We recommend that the EIS be revised to discuss this issue and include additional discussion/analysis to support the conclusion that impacts to salmon would be negligible.
Response
Regarding the dredging operation, the DMMP incorporates efforts to avoid salmon and steelhead individuals and runs. Some fish will be difficult to avoid, but the dredging technique chosen (clamshell) has the least potential of capturing fish.

The DMMP/EIS acknowledges that the proposed alternatives would have more than a "negligible" effect on anadromous fishes. Fall chinook typically have an ocean type rearing life history and typically outmigrate seaward during the summer as subyearlings. (Tiffan et al, 2001). According to Williams and Bjornn 1998, "A small proportion of hatchery and natural subyearling fall chinook salmon residualized and migrated early in spring 1997; however, as with fish released in 1995, the number that overwintered and migrated seaward as yearlings in spring was

small and did not effect survival estimates." Therefore, the Corps does not believe that a "high proportion" of fall chinook over winter every year. Never the less, the DMMP/EIS states in Section 3.1.1.1.3 and in Appendix F that proposed activities may affect fall chinook salmon by dredging.

Organization
U.S. Environmental Protection Agency
Comment 24
We are concerned with the lack of information, or reliance on very old data (circa 1973), used to characterize current (baseline) water quality conditions in the draft EIS. We recommend that current baseline information related to nutrients, toxic substances and salinity/conductivity in Lake Wallula and salinity/conductivity and toxic substances upstream of the Lower Granite dam be gathered and presented in the EIS.
Response
The DMMP/EIS has been revised to summarize these data as they pertain to the proposed action. In addition, the Lower Snake River Feasibility Report EIS includes baseline information on water quality, and is incorporated by reference. See Section 3.9 and Appendix H of the DMMP/EIS for the enhanced discussion of water quality data.

Organization
U.S. Environmental Protection Agency
Comment 25
The draft EIS provides little evidence that required government-to-government consultations with affected Tribes have been conducted. Further development of the plan and EIS should be conducted in consultation with the governing bodies of affected Tribes, consistent with EO 13175 (Consultation and Coordination with Indian Tribal Governments) which states that the US government will continue "to work with Indian tribes on a government-to-government basis to address issues concerning Indian tribal self government, trust resources, and Indian tribal treaty and other rights.
Response
Section 6.4.3 of the DMMP/EIS provides the current status of government-to-government consultation with the affected Tribes. The DMMP/EIS states that consultation has been initiated, but does not state or imply that consultation has been completed. The Corps intends to complete consultation prior to signing a Record of Decision.

Organization
U.S. Environmental Protection Agency
Comment 26
Environmental Justice Analysis - While Section 5.25 of the draft EIS presents a very general discussion of Executive Order (EO) 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) and the proposed plan, the EIS presents no evidence that the necessary analyses have been conducted. Identification of potential impacts and mitigation measures, developed in consultation with affected minority and/or low-income populations, must be included in the EIS to meet the direction of EO 12898 and the accompanying memorandum from President Clinton to the heads of all Departments and

Agencies. The Environmental Justice analysis presented in the EIS should include the following three major components: 1) Identification (including maps) of all low-income and people of color communities in the area that would be impacted by the proposed project. 2) Comprehensive accounting of all the impacts on low-income and people of color. 3) Identification of disproportionately high and adverse effects to the low-income and people of color communities.

Response

Executive Order 12898 states as a goal to make achieving environmental justice a part of each Federal agencies mission "to the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review." This Executive Order (EO) states in Section 3-302, ". . . (a) each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practicable and appropriate, Federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority populations or low-income populations." As pointed out in the comment, the Draft DMMP/EIS considers rather broadly the potential effects of the alternatives on environmental justice populations, concluding that the proposed plan is consistent with the intent of the EO. The DMMP/EIS is a programmatic plan and environmental evaluation that considers a long-term strategy for management of the navigation channel, dredged materials, and flow conveyance in the lower Snake River and McNary Reservoirs. As such, the potential environmental impacts identified are not anticipated to be borne disproportionately by any particular community or demographic group within the region.

In the Final DMMP/EIS the Corps has presented a more detailed examination of demographic data for the study area to demonstrate where environmental justice populations may be located in relation to the project area. The findings are documented in Sections 3.6 and 4.6 of the Final DMMP/EIS.

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1118 "F" Street • Lewiston, Idaho 83501-1930 • (208) 799-4370

Dirk Kempthorne, Governor
C. Stephen Allred, Director

January 3, 2002

Jack Sands, Project Manager
U.S. Army Corps of Engineers
Walla Walla District
210 North 3rd Avenue
Walla Walla, WA 99362-1876

RE: Dredged Material Management Plan and Environmental Impact Statement, McNary Reservoir and Lower Snake River Reservoirs

Dear Mr. Sands,

The Lewiston Regional Office of the Department of Environmental Quality (IDEQ) would like to provide comments on the Corps of Engineer's programmatic plan for maintenance of the authorized navigation channel in the lower Snake River reservoirs between Lewiston, Idaho and the Columbia River.

The designated beneficial uses protected under the Idaho Water Quality Standards in the Lower Snake-Asotin Subbasin, Hydrologic Unit Code 17060103, from Asotin Creek to the Lower Granite Dam pool are cold water biota, primary contact recreation, and domestic water supply. This section is not currently listed as a water quality limited segment on the Idaho section §303(d) list, but is a water quality limited segment on the Washington §303(d) list.

The designated beneficial uses protected under the Idaho Water Quality Standards for the Clearwater River, Hydrologic Unit Code 17060306, from the confluence of the North Fork Clearwater River to the Washington State line, are cold water biota, primary contact recreation, and domestic water supply. This section is a water quality limited segment on the Idaho §303(d) list for total dissolved gas. A Total Maximum Daily Load (TMDL) is due to be completed in 2003.

01 Dredging activities must not result in a violation of specific surface water quality criteria for the above mentioned designated use classifications as listed in the provisions of IDAPA 58.01.02.250. Monitoring the in-water activities is required to ensure Idaho State water quality standards are being met.

Please be advised that a Total Maximum Daily Load (TMDL) allocation for temperature is being developed by the U.S. Environmental Protection Agency for the Snake River, from the confluence of the Salmon River to its confluence with the Columbia River. IDEQ is the state agency responsible for implementing the provisions of the TMDL for the section of the Snake River from the confluence of the Salmon River to the ID/WA border. IDEQ asks

02 that the DMMP include documentation of dredging effects on water quality for this section for purposes related to this TMDL and its implementation. In addition, the TMDL could require a further reduction in pollutant discharge or further restoration from this proposed project.

As a joint participant in the DMMP, EPA is the agency responsible for coordinating state water quality agencies and ensuring Clean Water Act compliance across state boundary lines. A coordination plan should be developed for

03 Washington and Idaho, as these states are responsible for implementation of the provisions of the Clean Water Act in their respective sections of the Snake River and this activity. For example, how does this project gain relief from National Pollution Discharge Elimination System (NPDES) permit requirements issued by EPA? Idaho is unaware of any NPDES permit issued for this work.

O-15

4 As per Idaho's §401 water quality certification guidance, each dredging activity, including Corps civil works dredging activities and non-Corps dredging activities will be reviewed by IDEQ prior to the activity, or the issuing of a permit. The state of Idaho will consult with the Corps to determine if the activity requires an individual permit with public review and §401 water quality certification, or a Nationwide permit with regional conditions. §401 water quality certification will require application of Best Management Practices for controlling turbidity during the dredging activity. A summary report will be prepared by the Corps and provided to IDEQ providing BMP effectiveness in protecting water quality.

Coincident with these results will be an increase in available information on sediment and water quality in the lower Snake River Subbasin, the confluence of the Snake and Clearwater Rivers, and Lower Granite Reservoir. Valuable trend data will be collected from the 20-year's worth of dredging activities and should be provided in an activity report to IDEQ. IDEQ recommends the DMMP/EIS include provisions for

5 continued water quality management efforts in the confluence of the Snake and Clearwater Rivers. Water quality monitoring is necessary to establish the link between disturbing river sediments and the duration of effects to water quality.

The executive summary proposed raising the Lewiston levee as a method to minimize dredging in order to meet a 20-year goal, yet the selected alternative also was to provide a project life which expires in 2074.

6 The levees are being raised to increase conveyance, which has been reduced by sedimentation.

How does reducing sediment removal prevent future levee raises? How is the conveyance to be maintained after the 20-year plan has expired? Does the proposed plan result in future levee raises not currently addressed?

7 Is an increase in pool elevation expected to provide conveyance? If so, has the effects of increased hydraulic head in regards to infiltration through the dike structure been evaluated? Will the existing pumping facilities be adequate?

The City of Lewiston and the Corps will have to meet Clean Water Act NPDES stormwater quality

8 regulations in the near future. If the pool elevation is increased, and infiltration rates do increase, the residence time in the existing seepage and stormwater collection system will decrease. Will this adversely affect the quality of the pumped discharge to the receiving river?

Thank you for the opportunity to provide comments on this proposed project. If you have questions or concerns regarding these comments, please contact our office at (208) 799-4370.

Sincerely,

Cindy Barrett

Cindy Barrett
Watershed Monitoring Coordinator

CC: Sandy Simmons, ACOE, Walla Walla
Jerome Hansen, IDFG, Lewiston
Doug Abderhalden, IDEQ, Boise

Organization
Idaho DEQ, Lewiston regional Office, Watershed Monitoring Coordinator
Comment 1
Dredging activities must not result in a violation of specific surface water quality criteria for the above mentioned designated use classifications as listed in the provisions of IDAPA 58.01.02.250. Monitoring the in-water activities is required to ensure Idaho State water quality standards are being met.
Response
The Corps has in the past and plans to continue monitoring water quality during dredging activities to ensure compliance with applicable water quality standards. A sampling and analysis plan will be developed for each dredging activity, and submitted to IDEQ for review as part of the Clean Water Act 401 certification process. The DMMP Monitoring Program is included in the Final DMMP/EIS as Appendix M.

Organization
Idaho DEQ, Lewiston regional Office, Watershed Monitoring Coordinator
Comment 2
IDEQ asks that the DMMP include documentation of dredging effects on water quality for this section for purposes related to this TMDL and its implementation. In addition, the TMDL could require a further reduction in pollutant discharge or further restoration from this proposed project.
Response
The Corps acknowledges that a TMDL allocation for temperature is being developed for the Snake River, from the confluence of the Salmon River to its confluence with the Columbia River. The Corps routinely monitors temperature at established total dissolved gas monitoring stations in Lower Granite Reservoir. When dredging operations are conducted during the winter, the overall effect of dredging on reservoir temperature is expected to be minimal. Potential summer dredging of backwater areas may have a localized effect on water temperature, but it would not be expected to have a measurable effect on water temmperature in the reservoirs. Creation of shallow water habitats is expected to result in localized near-shore temperature increases. Because of the relatively small surface area of the proposed habitats, combined with the increased depth in the confluence area and the amount of water exchange occurring in the reservoir, impacts to the overall reservoir temperature are anticipated to be relatively minor. Also see response to the Environmental Protection Agency's Comment 10.

Organization
Idaho DEQ, Lewiston regional Office, Watershed Monitoring Coordinator
Comment 3
A coordination plan should be developed for Washington and Idaho, as these states are responsible for implementation of the provisions of the Clean Water Act in their respective sections of the Snake River and this activity.
Response
Although a specific coordination plan has not been developed at this time, the Corps will continue to coordinate with the Idaho Department of Environmental Quality, the Washington Department of Ecology, and the Oregon Department of Environmental Quality, as well as the U.S. EPA, for Clean Water Act compliance throughout the implementation of the DMMP. The LSMG and Dredged Material Evaluation Framework present specific opportunities for continued coordination.

Organization
Idaho DEQ, Lewiston regional Office, Watershed Monitoring Coordinator
Comment 4
As per Idaho's 401 water quality certification guidance, each dredging activity, including Corps civil works dredging activities and non-Corps dredging activities will be reviewed by IDEQ prior to the activity, or the issuing of a permit. The state of Idaho will consult with the Corps to determine if the activity required an individual permit with public review and 401 water quality certification, or a Nationwide permit with regional conditions. Clean Water Act 401 water quality certification will require application of Best Management Practices for controlling turbidity during dredging activity. A summary report will be prepared by the Corps and provided to IDEQ providing BMP effectiveness in protecting water quality.
Response
The Corps will continue to work with IDEQ regarding the implementation of each dredging activity. IDEQ will have input into each dredging project through the Clean Water Act 401 certification process. Further, the Corps will coordinate with IDEQ, and other appropriate water resource agencies, in the assessment of BMP effectiveness in protecting water quality.

Organization
Idaho DEQ, Lewiston regional Office, Watershed Monitoring Coordinator
Comment 5
IDEQ recommends the DMMP/EIS include provisions for continued water quality management efforts in the confluence of the Snake and Clearwater Rivers.
Response
The DMMP addresses water quality associated with dredging and dredged material management. Overall, water quality in Lower Granite Reservoir is associated with operation of the project. Sediment and water quality data collected as part of dredging activities will be provided to IDEQ as it becomes available. Information gathered during each dredging project will be considered when planning future dredging projects within the 20-year period. The Corps will continue to work with IDEQ throughout the implementation of the plan. IDEQ will also have continued input through the Clean Water Act 401 permitting process.

Organization
Idaho DEQ, Lewiston regional Office, Watershed Monitoring Coordinator
Comment 6
The levees are being raised to increase conveyance, which has been reduced by sedimentation. How does reducing sediment removal prevent future levee raises? How is the conveyance to be maintained after the 20-year plan has expired? Does the proposed plan result in future levee raises not currently addresses?
Response
Reducing sediment removal does not prevent future levee raises. The levee plan was developed in conjunction with the reduced sediment removal and is expected to provide the desired conveyance and level of flood protection through the year 2074. The need for levee raises would be re-evaluated after 2074 based on conditions at that time.

Organization
Idaho DEQ, Lewiston regional Office, Watershed Monitoring Coordinator
Comment 7
Is an increase in pool elevation expected to provide conveyance? If so, has the effects of increased head in regards to infiltration through the dike structure been evaluated? Will the existing pumping facilities be adequate?
Response
The proposed levee raise provides for increased pool elevation during extreme flood events and, thus, provides conveyance while maintaining a designed level of protection. The normal pool operating elevation would not increase as a result of the proposed levee raise. During normal operating conditions, the water level would remain at its current elevation, so there would be no increased head and, thus, no increased infiltration.

Infiltration could occur during high-flow (i.e., flood) events, such as the 100-year flood or the standard project flood. Flood events provide a temporary condition in which infiltration could occur, and as such, are not expected to result in substantial amounts of infiltration. No specific evaluations of potential changes in infiltration rates associated with the proposed levee raises were conducted. However, the pump stations behind the levee system are designed for the 100-year storm water event and are anticipated to be adequate to control infiltration associated with flood events. Additional storm water flow from flood infiltration to the storm water pumping system is anticipated to be minimal.

Organization
Idaho DEQ, Lewiston regional Office, Watershed Monitoring Coordinator
Comment 8
If the pool elevation is increased, and infiltration rates do increase, the residence time in the existing seepage and stormwater collection system will decrease. Will this adversely affect the quality of the pumped discharge to the receiving rivers?
Response
The levee raise is not expected to increase the normal operating pool elevation. The increased pool elevation during flood events does have the potential to reduce residence time in the stormwater collection system and impact the quality of the discharge. However, such events are expected to be infrequent and of limited duration and the impacts are anticipated to be minimal. The levee raise will better ensure that the river waters do not inundate the existing seepage and stormwater collection system directly by overflow which would have a greater adverse affect on water quality.

IDAHO FISH & GAME
CLEARWATER REGION
1540 Warner Avenue
Lewiston, Idaho 83501-5699

Dirk Kempthorne / Governor
Rod Sando / Director

January 7, 2002

Lieutenant Colonel Richard P. Wagenaar
Department of the Army
Walla Walla District, Corps of Engineers
ATTN: Dredged Material Management Plan
201 North Third Avenue
Walla Walla, Washington 99362-1876

RE: Draft Dredged Material Management Plan and Environmental Impact Statement

Dear Colonel Wagenaar:

Thank you for the opportunity to review the draft Dredged Material Management Plan and Environmental Impact Statement (DMMP/EIS), McNary Reservoir and Lower Snake River Reservoirs. Our comments augment those which we previously provided on the preliminary draft of the DMMP/EIS in November 2000.

O-18

Alternatives

1 The four alternatives analyzed do not cover a wide nor creative range of solutions for the serious, long-term problem of sediment accumulation and decreasing flow conveyance and capacity in Lower Granite Reservoir. All include dredging and dredge disposal, and three include a three-foot levee raise. All of the alternatives including the preferred are costly and offer only short-term solutions to a very complex long-term problem.

Several issues that we raised in our November comments were either not addressed or not addressed fully in the DMMP/EIS. For instance, we suggested that the DMMP/EIS
2 include a more fully developed range of alternatives, including more natural processes for sediment removal and transport. Alternatives such as a spring sediment "flushing" event should be analyzed. While a flushing alternative may require seasonal modifications to reservoir operations, it may prove to be less expensive and provide more benefits to migrating anadromous fish than existing alternatives. We asked that the DMMP/EIS
3 thoroughly explore the relationship between the continued accumulation of sediment and the benefits of the State of Idaho significant contribution of flow augmentation. We
4 requested that the DMMP/EIS more thoroughly evaluate potential changes in velocity, temperature, smolt travel time, survival, crowding, and disease exposure of listed stocks in each alternative. We suggested that the DMMP/EIS evaluate the use of flows from

5 Dworshak Dam to induce adult steelhead movement upstream into the lower Clearwater River prior and during the winter work window. We also requested a complete analysis of the effects of the development of shallow water habitats, in combination with the long-
6 term accumulation of sediment in the upper part of Lower Granite pool, on water temperatures.

Sediment Accumulation

Approximately 3.2 million cubic yards of sediment accumulates annually in Lower Granite Reservoir. Specific amounts vary year to year. An examination of sediment columns exposed during the 1992 experimental reservoir drawdown suggests that at least 3 feet of sediment can be accumulated during high water years.

Under the Preferred Alternative, approximately 300,000 cubic yards of sediment will be dredged every two years, primarily from the 14' by 250' navigation channel. This represents only 5 percent of the annual build-up of sediment.

Based on a 484 thousand acre-feet capacity of Lower Granite Reservoir, sediment recruitment represents approximately a 1 percent reduction in total reservoir capacity every two to three years. Over the next 100 to 150 years, the reservoir capacity can be expected to decrease by approximately 50 percent.

7 Because most of the sediment is generated from land use activities in the upper part of the watershed, it is important that the Corps work closely with other agencies and the public to address on-going upstream erosion. The DMMP/EIS should provide additional analysis and solutions to this issue.

The Preferred Alternative includes a proposed 3-foot levee raise in Lewiston, to replace flow conveyance lost to sediment build-up in the reservoir. With almost 3 million cubic
8 yards of sediment accumulating annually in the reservoir, how long will it be before the next levee raise is proposed? If we understand the analysis correctly, a 100- year event can be expected to overtop raised levees near the end of the planning period (75 years). Based on the analysis in the DMMP/EIS, the next levee raise will require extensive and expensive infrastructure changes, including raising or modifying several bridges in the Lewiston area.

Levee raises effectively raise the elevation of the river further above the city during flood events, leading to potential long-term drastic consequences during flood events. We have consistently learned these lessons along other rivers of the country, with the Mississippi River perhaps the most high profile. We are disappointed that the DMMP/EIS does not
9 analyze and discuss potential long-term implications of future levee raises, drawing on a variety of available examples.

Should we care today about the long-term prognosis for Lower Granite Reservoir? We think so, as solutions are likely to get more expensive and complex in the future. We feel
10 that the Corps, through the DMMP/EIS process, has a responsibility to the public and

future generations of Idahoans to provide a realistic description of these projects 75 years and beyond, and potential ramifications to the public and fish and wildlife resources.

Sediment Disposal/Beneficial Use

We are in favor of utilizing dredge material to create favorable habitats in the reservoir where possible. We remain somewhat skeptical of the degree of benefit however. We
11 disagree that the placement of dredged material will effectively mitigate for the lost shoreline and shallow water rearing habitat utilized by juvenile fall chinook under pre-impoundment conditions (Appendix F-57). How stable will the artificially created
12 habitats be long-term in light of fluctuating reservoir levels or wave action? How soon will they be covered with silt and provide the same poor quality of habitat as most of the rest of the reservoir? Appendix F reported that under a no project alternative, about 2 inches per year of fine sediment would accumulate across the bench of the proposed in-water disposal site. Under the Preferred Alternative, won't this silt accumulate on the surface of the sand substrates?

We are not convinced that the shallow water habitats created will not accentuate predation by smallmouth bass or northern pike minnows. The DMMP/EIS suggests that species such as smallmouth bass prefer larger substrates than juvenile chinook salmon.
13 While we generally agree, we assume that higher temperatures and presence of juvenile chinook (prey) will likely be stronger attractants to smallmouth bass than substrate size.

Appendix G mentions that the disposal site near RM 116 was selected because it could provide suitable resting/rearing habitat, would not interfere with navigation, wouldn't harm cultural resources, and would be of sufficient size to accommodate dredged material for several years. How many years is several, and what other disposal sites exist
14 long-term (i.e. life of the project and beyond)? The Corps is still in the process of completing a Feasibility Study to evaluate and screen alternative measures that may increase the survival of juvenile anadromous fish through the Lower Snake Reservoir
15 system. Disposal sites selected should not compromise the ability of the Corps to implement other potential long-term changes in management of the Lower Snake River reservoir system.

The DMMP/EIS concludes that the creation of shallow water habitats will have neglible effects on temperature. This may be the case in the near term. However, over the long-
16 term, created shallow water habitats in combination with the accumulation of 3.2 million cubic yards of sediment annually in the upper end will exacerbate water temperature problems caused by the original impoundments. Among other things, high temperatures can negatively effect adult anadromous fish migrations, therefore impacting Corps mitigation obligations.

Impacts of Dredge Operations

Adhering to the winter work window (December 15 to March 1) during dredge operations will reduce but not eliminate potential impacts to a variety of aquatic
17 resources. We feel that the phrases "harmless" or "easily avoidable" (Appendix F-60) are not appropriate in describing potential impacts of dredging operations to fish populations.

18 Analysis of potential impacts to steelhead is understated in the DMMP/EIS. During some winters, a relatively high percentage (at least 40 percent) of Clearwater B run steelhead are in the Lower Granite pool during the winter work window. The implied correlation between lack of fisherman and lack of fish at the confluence is not accurate in all years.

A small percentage of juvenile fall chinook will also over winter in the Lower Granite pool. Data indicates that the yearling fall chinook that outmigrate the second year exhibit a higher Smolt to Adult Return (SAR) ratio than 0 age fall chinook. Some potential to
19 entrain these fish exists during dredging operations.

Limited data is available on the presence of different life stages of lamprey in Lower Granite Reservoir. As the DMMP/EIS points out, some evidence suggests that amocetes may be in the substrate in the reservoir bottom. Careful monitoring during dredge
20 operations, including examination of dredge materials, will be necessary to ensure that lamprey amocetes or other juvenile fish are not entrained.

21 The DMMP/EIS provides a fairly detailed analysis of white sturgeon data from Lower Granite, but doesn't cover any potential direct impacts to sturgeon while conducting dredge operations in the winter.

Thank you for the opportunity to provide comments on the DMMP/EIS. We are hopeful that the Corps can work with other agencies and the public to develop reasonable long-term solutions to sediment and flow conveyance, and accompanying aquatic resource issues in Lower Granite Reservoir. Please contact Jerome Hansen (208-799-5010) of this office if we can provide additional information.

Sincerely,

Cal Groen
Clearwater Regional Supervisor

cg/jh/ss

c: Cindy Barrett, DEQ
Jerome Hansen
Virgil Moore
Ed Schriever
Tracey Trent, Natural Resources Policy Bureau

O-19

IDAHO FISH & GAME
600 South Walnut
P.O. Box 25
Boise, Idaho 83707-0025

November 27, 2000

Dirk Kempthorne / Governor
Rod Sando / Director

Mr. Jack Sands
US Army Corps of Engineers
Walla Walla District
201 North Third Ave.
Walla Walla, WA 99362

Dear Mr. Sands,

Pursuant to Gregg Servheen's briefing with you in July on the Dredged Material Management Plan (DMMP), the Idaho Department of Fish and Game (Department) submits the enclosed comments. The comments are based on a preliminary draft of the programmatic DMMP EIS. Our understanding is that the U.S. Army Corps of Engineers (Corps) and the Environmental Protection Agency are just finishing up an internal review of the preliminary draft DMMP EIS.

An "interim" document that just addresses this winter's dredging for port access is already out for comment. While our comments are more focused on the programmatic EIS, there is relevance to the short-term action proposal and there may be aspects of our comments that the Corps may want to consider while finalizing a public review draft for the programmatic EIS.

If you have any questions regarding the Department's comments, please contact Gregg in our Clearwater Regional Office at (208) 799-5010. We would also like our comments shared with the Regional Dredging Team.

Thank you again for your time. Please keep the Department involved in this important analysis and project.

Sincerely,

Virgil Moore, Chief
Bureau of Fisheries

Enclosure

Cc: J. Yost, Governors Office
T. Trent, IDFG
S. Penney, NPT
Fish Passage Advisory Committee
C. Groen, IDFG
A. Irby, IDFG Commission
NMFS, Olympia

O-20

Comments on the US Army Corps of Engineers' Draft Dredged Material Management Plan Environmental Impact Statement

Idaho Department of Fish and Game
Boise, Idaho
November 27, 2000

We appreciate the opportunity to comment on the US Army Corps of Engineers' (Corps) Draft Dredged Material Management Plan (DMMP) Environmental Impact Statement (EIS) for the lower Snake River. This is a very important project affecting the communities of Lewiston, Clarkston, Orofino, and the conservation of fish stocks in Idaho listed for protection under the federal Endangered Species Act (ESA).

Since implementation of dredging in Lower Granite pool, several things have changed that make it imperative the EIS and any interim dredging projects be more carefully evaluated than is done within the draft EIS. The primary changes, of course, have been the continuing decline and subsequent listing of anadromous salmon and steelhead stocks.

The Lower Granite reservoir impoundment has reduced substrate and riparian cover for resting and predator avoidance during outmigration, reduced water velocity in the impoundment pools, increased the number of predators, and changed water temperatures. The increasing buildup of sediment within lower Granite pool and subsequent reduction of channel capacity and flow conveyance in the upper reaches of the reservoir may also be contributing to temperature problems caused by the impoundments in the lower Snake River.

We understand that approximately 3.2 million yards of sediment currently collects in Lower Granite Reservoir annually. Most of this sediment accumulates in the upper section of lower Granite Reservoir at the confluence of the Clearwater and Snake Rivers and it impinges on the Ports of Clarkston and Lewiston, and the recreation areas of these cities. At no time since the beginning of the dredging program in lower Granite Reservoir in 1982 has the Corps removed more than 31% of the total annual accumulation of sediment in the project; most of the dredged sediment has been disposed in lower reaches of the reservoir. Based on a 484 thousand acre-feet capacity of Lower Granite Reservoir, this sediment recruitment represents approximately a 1% reduction in total reservoir capacity every two to three years. This effect is accentuated in the upper reaches of the reservoir, where all of Idaho's juvenile and adult salmon and steelhead must pass. One effect of this accumulating sediment has been to reduce channel capacity and increase surface water elevations associated with flood discharge. Another effect is that surface area of the reservoir has increased relative to depth, particularly in the upper reaches of the reservoir, resulting in additional solar heating of the reservoir.

See 16 The effect of not being able to maintain dredge removal consistent with dredge accumulation during the past 25 years and for the foreseeable 20 years of the DMMP may exacerbate water temperature problems caused by the original impoundments. Increased water temperature can impair juvenile and adult salmon and steelhead migration. Delayed cooling of the impoundments

in the fall can impair adult steelhead and fall chinook movement into the Snake and Clearwater rivers. This effect is not specific to listed fish, but can also impact non-listed hatchery steelhead available to tribal and sport fisheries in Idaho.

Although the contribution of sedimentation to this water temperature problem may be relatively small, the accumulating effect may further threaten the conservation and potential recovery of listed salmon and steelhead stocks within the Snake River basin. For example, current Federal Columbia River Power System (FCRPS) operations require Idaho to provide approximately 2 million acre-feet of flow augmentation annually in an attempt to address water velocity and water temperature concerns in the lower Snake River. The ability of flow augmentation to address water velocity and temperature concerns is relatively minor, but the augmentation persists in spite of significant impacts to other State interests. One of our concerns is that continuing sedimentation will further reduce any benefits of the State's significant contribution of flow augmentation. The DMMP EIS should thoroughly address this concern.

In light of decreasing channel capacity in Lower Granite Reservoir, and the potential for increasing water temperatures, the Department believes the DMMP can directly affect Snake River salmon and steelhead migration and survival. We recommend the DMMP fully assess
22 lower Snake River juvenile salmon and steelhead migration and survival as it may be affected by the operation and maintenance efforts of the Corps dredge program and DMMP for the next 20 years of the project. The programmatic EIS should more thoroughly evaluate the change in velocity, temperature, resting/feeding habitat, smolt travel time, survival, crowding, and disease exposure of listed fish stocks within each of the alternatives of the EIS. These changes should be assessed within the context of other salmon and steelhead recovery measures and the overall net impact to water temperature, water velocity, fish migration, and survival.

We understand the levee system surrounding Lewiston is not designed to provide flood control to Lewiston but rather to prevent inundation of the city. The draft EIS evaluated modifying the existing levees by 12, 8, 4, and 3 feet. Modifying the levees does not appear to fit within the DMMP project purpose. The levees were designed and constructed to be an upstream extension of the dam to allow Lower Granite Reservoir to pass a Standard Project Flood (SPF) event while protecting Lewiston from inundation. Any modification of the levees is a modification of the operation of the Lower Granite project. Project modification of increasing levee heights will
23 allow the reservoir to pass the SPF, but may also contribute to declining pool and water quality conditions and thus increase potential threats to recovering listed fish stocks. We request these alternatives be reevaluated because of their potentially negative impacts to salmon and steelhead conservation and recovery in the Snake River basin. We also request the DMMP be included and
24 assessed within the context of the Lower Snake River Juvenile Salmon Migration Feasibility Report/Environmental Impact Statement.

Based on the scope and duration of the DMMP and the potential effects described above, we
25 recommend the DMMP EIS include a more fully developed range of alternatives that provides enhancement of migrating anadromous fish. It does not appear the draft DMMP has fully
See 2 explored more natural processes for sediment removal and transport. For example, dam modifications or inriver structures to increase water velocity in the main channel can reduce sedimentation *and* improve fish migration conditions.

We recommend the DMMP also consider additional measures to minimize adverse impacts to fish and fisheries during dredging operations. The current work window for the project is
See 5 December 15 to March 31. This work window overlaps with the presence of holding or migrating adult steelhead. Alternatively, we suggest the DMMP evaluate use of flows from Dworshak dam to induce adult steelhead movement upstream into the lower Clearwater River prior and during the December 15 March 31 work window to reduce the potential for impacts to listed steelhead. Because a relatively high percentage of the listed Clearwater B run (40 - 60%) steelhead will be in the pool and dredging areas at this time, it is likely that dredging activities may have adverse effects on adult steelhead. Minimizing the number of steelhead that may be affected by dredging activities by inducing their movement upstream out of the project area is an alternative the DMMP should evaluate. Fall and winter drafts from Dworshak Reservoir should not be used if these drafts reduce the probability of refill to maximum flood control levels by early April. Shifting flood control responsibilities and timing, as well as shifting some of the summer flow augmentation water into the fall and early winter, will aid this effort.

The estimated cost of the dredging project is at least $3/cubic yard for inwater disposal of dredged material. Costs would go up an estimated 3-4 times for disposal of dredged material in
26 upland sites. We suggest that the final EIS improve its cost-benefit analysis of the dredge program. Because the pool is maintained by the Lower Granite project, each alternative, including the natural river alternative, should be economically assessed using local tax costs that support the waterways/ports, operation and maintenance for navigation, salmon mitigation, and occasional federal costs like lock repair. We recommend this analysis include the level and potential impacts of dredging required to catch up with shortfalls in the existing dredge program, potential mitigation for declining pool conditions because of sedimentation, and fish and wildlife benefit costs and risks.

The dredge program has been identified as benefiting chinook salmon by providing critical shallow water habitats free from potential predators. While we believe some of these benefits are
27 real, we ask that the EIS assess the availability of similar habitats under a natural river and without dredging the lower Granite pool. Certainly continuing sedimentation in lower Granite pool is also increasing shallow water habitats. The effects of these increased areas of shallow water on water temperature should also be considered in the DMMP. Because a 404 permit for dredging requires that in-water disposal be for beneficial use, this determination will need to be made within the EIS with full consideration of the risk and potential benefit to all listed fish species.

28 We request Idaho Department of Fish and Game be included on the Regional Dredging Team identified in the DMMP EIS.

O-21

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 1
The four alternatives analyzed do not cover a wide nor creative range of solutions for the serious, long-term problem of sediment accumulation and decreasing flow conveyance and capacity in Lower Granite Reservoir. All include dredging and dredge disposal, and include a three-foot levee raise. All of the alternatives, including the preferred, are costly and offer only short-term solutions to a very complex long-term problem.
Response
The Corps appreciates the complexity of issues of long-term dredged material management as they relate to the lower Snake River and McNary Reservoirs. The DMMP/EIS reflects the alternatives identified through the scoping meetings and subsequent analysis by the Corps. The range of alternatives meets the project purpose and need. Non-dredging and reduced dredging alternatives were considered. The Corps considered short-term and long-term approaches, and was unable to identify any non-dredging alternatives that would preclude the need for dredging. Reducing sediment generated by land use practices was considered, but would not eliminate the need for dredging. Although the Corps has no authority to change land use practices on non-Corps property, the Corps will use the Local Sediment Management Group to pursue possible modifications to land use practices.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 2
We suggested that the DMMP/EIS include a more fully developed range of alternatives, including more natural processes for sediment removal and transport. Alternatives such as a spring sediment "flushing" event should be analyzed.
Response
Spring sediment "flushing" (both with and without drawdown) has been considered in the past, and is not a viable strategy for meeting the DMMP's objectives.

Without drawdown, a spring "flushing" operation would not develop sufficient velocities within the reservoir to pick up significant quantities of materials and transport them downstream. With drawdown, the sediment flushing could be effective, but the impacts to operations as well as project facilities and major support features and public infrastructure would exceed the benefits of sediment flushing. Also, flushing would just move the sediment downstream only to potentially cause problems elsewhere. See also response to Save our Wild Salmon's comment 10.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 3
We asked that the DMMP/EIS thoroughly explore the relationship between the continued accumulation of sediment and the benefits of the State of Idaho significant contribution of flow augmentation.
Response
Flow augmentation has target flows of 80,000 to 100,000 cubic feet per second (cfs) in the spring (i.e., from April 10 – June 21) and 50,000 to 55,000 cfs in the summer (i.e., from June 22 – July 31) for Lower Granite Reservoir. Flows in this range usually do not carry high sediment loads in

suspension and, therefore, do not contribute substantially to sedimentation within the reservoirs of the lower Snake River. Higher flows – greater than 150,000 cfs – usually associated with spring runoff events tend to carry greater sediment loads (than flow augmentation scenarios) and, therefore, contribute more sedimentation within the reservoir system. Consequently, there is a minor, but unsubstantial, relationship between accumulation of sediment in Lower Granite Reservoir and the State of Idaho's flow augmentation.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 4
We requested that the DMMP/EIS more thoroughly evaluate potential changes in velocity, temperature, smolt travel time, survival, crowding, and disease exposure of listed stocks in each alternative.
Response
The potential change in velocities resulting from dredging the navigation channel to a maximum of 16 feet (overdraft) in a 250-foot wide channel at the confluence area of the Snake and Clearwater rivers confluence would not be substantial. The position of the navigation channel at the confluence area, in that it is the head of the reservoir and, therefore, has lower velocities, is precisely why the majority of the sediment settles out there. Therefore, if velocities do not substantially change, smolt travel time will not substantially change, survival will not change, and crowding and disease exposure will not change. Even if a substantial change in velocities occurred at the confluence area, this may serve to benefit juvenile salmonids, but would have no impact on adult salmonids, which migrate upstream along shorelines. Although the creation of shallow water benches may have a small, localized impact on increasing temperatures in the shallow water area, dredging the channel to navigation depth would reduce the exposure of the river bottom as a whole to solar warming.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 5
We suggested that the DMMP/EIS evaluate the use of flows from Dworshak Dam to induce adult steelhead movement upstream into the lower Clearwater River prior and during the winter work window.
Response
Use of flows from Dworshak Dam by spilling water during the winter in water work window would have an unknown effect on overwintering adult and juvenile steelhead. The average temperature for water passing through Dworshak Dam at the scroll case in December of 1999-2001 was 7.13°C (USACE 2002). As dredging would begin in December, a temperature change would not be a cue for fish to move upstream. Since a temperature change would not be expected, steelhead would have to move upstream based on an increase in total river discharge and we know of no evidence that indicates that they would. However, if they would, it may also trigger fish of non-Clearwater origins to migrate up the Clearwater River. Another uncertainty is the effect that higher flows might have on juvenile salmonids and Bull Trout rearing in the North Fork Clearwater and Clearwater Rivers.

In addition, although selective withdrawl may eventually help to minimize entrainment, the food base for bull trout in Dworshak reservoir, kokanee, may be entrained with winter spill with

unknown effects on bull trout (Maiolie and Elam. 1996).

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 6
We also requested a complete analysis of the effects of the development of shallow water habitats, in combination with the long-term accumulation of sediment in the upper part of Lower Granite pool, on water temperatures.
Response
Water temperatures may increase at in the immediate vicinity of the locations where new shallow-water habitat is created. Although the creation of shallow water benches may have a small, localized impact on increasing temperatures in the shallow water area, dredging the channel to navigation depth would reduce the exposure of the river bottom as a whole to solar radiation. Overall temperatures of the pool would not increase.

OrganizationIdaho Department of Fish & Game, Clearwater Region
Comment 7
Because most of the sediment is generated from land use activities in the upper part of the watershed, it is important that the Corps work closely with other agencies and the public to address on-going upstream erosion. TheDMMP/EIS should provide additional analysis and solutions to the issue.
Response
The Corps intends to do this through the Local Sediment Management Group. In addition, a primary objective for the Corps is management of dredged materials that accumulate in the navigation channel or affect flow conveyance in the Lewiston/Clarkston area. Not all sediment entering the lower Snake River system affects navigation or flow conveyance and, thus, the objective of the DMMP is not to find solutions to all sediment accumulation problems. None the less, the Corps does plan to use the LSMG as a forum for discussion and, potentially, action to address a broad range of sedimentation issues in the lower Snake River.

Also see response to comment 1, above.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 8
With almost 3 million cubic yards of sediment accumulating annually in the reservoir, how long will it be before the next levee raise is proposed?
Response
The preferred levee modification alternative, which includes a three-foot levee raise in selected areas, was designed to last through the 2074, which is the project life of the Lower Granite Dam. The proposed levee modification is based upon the best available data regarding sedimentation rates in Lower Granite reservoir. The Corps does not anticipate that future levee raises will be required prior to 2074. It is possible that the levee height may need to be re-evaluated for the years beyond 2074.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 9
The DMMP/EIS does not analyze and discuss potential long-term implication of future levee raises, drawing on a variety of available examples.
Response
The risk analysis presented in the DMMP/EIS Economic Analysis (Appendix C) does consider a variety of different levee raise and dredging program scenarios from the present through the year 2074, when the 100-year lifecycle of the original project will conclude. The best available information was used to estimate future need for increased flood protection and the likely costs of that protection. This was incorporated into the development and evaluation of alternatives. The Corps does not anticipate that future levee raises will be required prior to 2074 and, as such, "future levee raises" within the economic life of the Lower Granite project are not anticipated and were not examined in this DMMP.

The benefit-cost analysis that was part of the overall hydrological analysis was designed to evaluate a proposed project by considering the costs of the project over a period of time and comparing those with the benefits over the same period of time. The benefit-cost framework does take into consideration future implications of a project.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 10
We feel that the Corps, through the DMMP/EIS process, has a responsibility to the public and future generations of Idahoans to provide a realistic description of these projects 75 years and beyond, and potential ramifications to the public and fish and wildlife.
Response
The dredged material management plan's timeframe is 20 years. The DMMP was developed to be as flexible as possible to address future changes in conditions during the 20-year planning horizon. With respect to flow conveyance and the proposed levee modification, the Corps' analysis considered anticipated conditions through 2074, the designed economic life of the project, and used the best available data to estimate future needs. Further analysis could be required in 2074 to consider how to meet goals for flow conveyance at that point in time.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 11
We disagree that the placement of dredged material will effectively mitigate for the lost shoreline and shallow water rearing habitat utilized by juvenile fall chinook under pre-impoundment conditions (Appendix F-57).
Response
The Corps believes that all habitat improvement efforts are based on sound science are worthy of the effort. These efforts are not meant to mitigate for all habitat lost due to the impoundment but to provide incremental changes in the habitat to benefit the populations of endangered fish that may be using it.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 12
How stable will the artificially created habitats be long-term in light of fluctuating reservoir levels or wave action? Appendix F reported that under a no project alternative, about 2 inches per year of fine sediment would accumulate across the bench of the proposed in-water disposal site. Under the Preferred Alternative, won't this silt accumulate on the surface of the sand substrates?
Response
In the late 1980s to early 1990s, biological investigations were conducted in the Lower Granite Reservoir to study the effects of in water disposal on habitat use by various species of anadromous and non-anadromous fish. Although seven years of research showed a benefit for endangered salmonids, no recent studies have been conducted to determine the continued and long-term viability of these sites as beneficial to endangered salmonids. NMFS has requested that the Corps conduct further investigations into the biological integrity and benefits of the shallow water disposal sites. Bennett et al 1995 reported that the underwater island that was created had moved and redistributed in the deep-water habitat. However, Centennial Island, created in the early 1990s is still in place and does not appear to be moving.

Just downstream from the Port of Wilma, is the largest known single rearing area for fall chinook in Lower Granite Reservoir. It is currently composed of sand and is not being covered with silt. The investigations into the continued viability of the created habitat at Centennial Island, as put forth in the NMFS Biological Opinion (2000), would include an analysis of substrate quality. Dredged material placement site will be monitored to evaluate their stability and effectiveness (Appendix M).

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 13
We are not convinced that the shallow water habitats created will not accentuate predation by smallmouth bass or northern pike minnows. We assume that higher temperatures and presence of juvenile chinook (prey) will likely be stronger attractants to smallmouth bass than substrate size.
Response
Bennett et al 1995 found predators on the sandy areas of the created habitat. However, the predators found were in the larval life stage. Upon reaching a larger size, predators dispersed, presumably searching for cover. In addition, larval fish were one of the food components that were found in the stomachs of fall chinook sampled by Curet et al 1993. Fall chinook on an open sandy flat would be more able to avoid predators, than if they were amidst shorelines in warm water that had a great deal of cover.

Numerous scientists from federal, state, university and tribal agencies set up the study design in 1987. The researcher involved with many of the studies was David Bennett, Ph.D., a tenured professor at the University of Idaho. With a multiple year study design, a lead researcher who is a leading expert in this field, and a study design from the regions leading experts, the Corps believes that the science is sound. (Web et al 1987)

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 14
Appendix G mentions that the disposal site near RM 116 was selected because it could provide suitable resting/rearing habitat, would not interfere with navigation, wouldn't harm cultural resources, and would be of sufficient size to accommodate dredged material for several years. How many years is several, and what other disposal sites exist long-term (i.e. life of the project and beyond)?
Response
The Corps identified disposal sites that would be sufficient to accommodate dredged materials over the 20-year term of the DMMP. Plates 8-10, 12-13, and 15-16 illustrate the areas identified for shallow-water habitat creation, including the site at RM 116. The proposed woody riparian habitat establishment at RM 132 (Chief Timothy HMU, see Plate 17) and the site at RM 116 would be sufficient to accommodate dredged materials for at least the first two dredging cycles, based on quantities that are anticipated to be dredged.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 15
The Corps is still in the process of completing a Feasibility Study to evaluate and screen alternative measures that may increase the survival of juvenile anadromous fish through the Lower Snake Reservoir system. Disposal sites selected should not compromise the ability of the Corps to implement other potential long-term changes in management of the lower Snake River reservoir system.
Response
Section 1.6 of the DMMP/EIS describes the relationship between the DMMP/EIS and the Feasibility Study. Proposed dredging and dredged material management activities would not be inconsistent with the preferred alternative of the Feasibility Study.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 16
Over the long-term, created shallow water habitats in combination with the accumulation of 3.2 million cubic yards of sediment annually in the upper end will exacerbate water temperature problems caused by the original impoundments.
Response
Although the creation of shallow water benches will result in a localized increase in temperature in the shallow water area, dredging the channel to navigation depth will reduce the exposure of the river bottom in the channel to solar warming. The maximum total surface area of the shallow water habitats proposed over the 20-year life of the project amounts to less than 3% of the total surface acreage of Lower Granite Reservoir (246 acres/8900 acres) and would affect less than 0.8% of the total volume of the reservoir (considering an average 15 foot depth x 246 acres/ 483,800 acre feet). Because of the relatively small amount of influence, combined with the increased depth in the confluence area and the amount of water exchange occurring in the reservoir, impacts to the overall reservoir temperature are anticipated to be relatively minor. The

Corps will monitor the habitat creation areas to evaluate the biological activities as well as stability and water quality characteristics of the area, and will evaluate the effectiveness of these areas based on the monitoring results.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 17
We feel that the phrases "harmless" or "easily avoidable" (Appendix F-60) are not appropriate in describing potential impacts of dredging operations to fish populations.
Response
The Corps acknowledges that these terms do not adequately describe the potential impacts to fish. The proposed dredging and dredged material management activities may adversely affect fish species, including species listed under the Endangered Species Act. However, the activities proposed under the DMMP are not expected to have significant adverse effects on fish populations, nor cause jeopardy to the continued survival of listed fish species (see Appendix F).

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 18
Analysis of potential impacts to steelhead is understated in the DMMP/EIS.
Response
Appendix F of the DMMP/EIS states that dredging operations are likely to adversely affect juvenile steelhead that have the potential to rear in the reservoir areas during the work window, as well as are likely to adversely affect adults using the confluence area during the winter in-water work window. Equipment and work windows were specifically meant to avoid as many fish as possible. However, the Corps realizes that some fish may be negatively affected.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 19
Some potential to entrain these fish exists during dredging operations.
Response
Fall chinook typically have an ocean type rearing life history and typically outmigrate seaward during the summer as subyearlings (Tiffan et al, 2001). According to Williams and Bjornn 1998, "A small proportion of hatchery and natural subyearling fall chinook salmon residualized and migrated early in spring 1997; however, as with fish released in 1995, the number that overwintered and migrated seaward as yearlings in spring was small and did not effect survival estimates." This indicates that only a small proportion of fall chinook may over winter every year.

The Corps agrees that some overwintering fall chinook may be impacted by the dredging operations. Thus the Corps' finding in the Biological Assessment that proposed activities may affect and are likely to adversely affect juvenile fall chinook salmon (See Appendix F). By using the equipment identified in the DMMP/EIS and conducting dredging during periods when the fewest fish would be present in the dredging areas, the Corps is attempting to minimize impacts

as much as possible.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 20
Careful monitoring during dredge operations, including examination of dredge materials, will be necessary to ensure that lamprey amocetes or other juvenile fishare not entrained.
Response
The Corps intends to have a biologist on site at the beginning and possibly periodically through the dredging operations to determine whether dredging operations are impacting juvenile salmonids and lamprey(See DMMP/EIS Biological Assessment for Anadromous Fish Species).

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 21
The DMMP/EIS provides a fairly detailed analysis of white sturgeon data from Lower Granite, but doesn't cover any potential direct impacts to sturgeon while conducting dredge operations during the winter.
Response
Sturgeon were noted as potentially benefiting from dredging down to the original river channel. The DMMP/EIS alternatives would be removing primarily the top 3-5 feet of sediment from the navigation channel, and would not include significant dredging to the original river channel. Bennett et. al. (1995) noted that deep water disposal of dredged material actually had temporary benefits to white sturgeon in that the macroinvertebrates that were redistributed in the lower river served as a food source for these fish, and sturgeon abundance in these locations increased during the disposal periods. EPA's guidance to the Corps with respect to managing dredged materials was to avoid "wasting" dredged material (i.e., deep water or upland disposal) when other options, such as habitat creation or other beneficial uses, were available. No long-term benefits were found with deep water disposal, and other options exist for beneficial use or placement of dredged materials. See section 2.2.4.1 of the DMMP/EIS.

The equipment that is planned for use during most dredging operations (i.e., clamshell dredge) would result in minimal entrainment of all mobile aquatic organisms, including sturgeon. In addition, areas where the highest concentrations of sturgeon are known to occur would not be dredged.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 22
We recommend the DMMP fully assess lower Snake River juvenile salmon and steelhead migration and survival as it may be affected by the operation and maintenance efforts of the Corps dredge program and DMMP for the next 20 years of the project. The programmatic EIS should more thoroughly evaluate the change in velocity, temperature, resting/feeding habitat, smolt travel time, survival, crowding, and disease exposure of listed fish stocks within each of the alternatives of the EIS.

Response
The DMMP/EIS evaluates the environmental effects, including the effects on ESA-listed fish species, of the dredging and dredged material management alternatives. This evaluation considered the findings regarding juvenile salmon and steelhead migration that were presented in the Lower Snake River Juvenile Salmon Migration Feasibility Study Final EIS. Further, NMFS' Biological Opinion (2000) for the proposed dredging and dredged material management program found that it would not jeopardize listed fish species.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 23
Modifying the levees does not appear to fit within the DMMP project purpose. Project modification of increasing levee heights will allow the reservoir to pass the SPF but may also contribute to declining pool and water quality conditions and, thus, increase potential threats to recovering listed fish stocks.
Response
Alternatives that consider levee modifications were included in the DMMP as a means to address flow conveyance while maintaining the designed level of flood protection for the Lewiston/Clarkston area. Raising the levees represents an alternative to increased dredging to provide flow conveyance. The proposed levee raise would not affect normal pool elevation, and is not expected to affect water quality or pose additional threats to recovering listed fish stocks.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 24
We also request the DMMP be included and assessed within the context of the Lower Snake River Juvenile Salmon Migration Feasibility Report/EIS.
Response
To the extent applicable, the DMMP and Lower Snake River Juvenile Salmon Migration Feasibility Study/EIS were integrated with respect to purpose and subject matter. Section 1.6 of the DMMP/EIS explains the inter-relationship between these two planning efforts and documents. The Section 404(b)(1) evaluation for the Feasibility Study references the DMMP documentation as the location of the Corps' analysis of the effects of dredging and dredged material management on salmonids.

Also see response to Save Our Wild Salmon comment 37.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 25
We recommend the DMMP/EIS include a more fully developed range of alternatives that provides enhancement of migrating anadromous fish.
Response
The DMMP/EIS examines a broad range of alternatives that are responsive to the stated purpose and need, which is focused on maintenance of the existing navigation channel and flow

conveyance capacity of the lower Snake River and McNary Reservoirs. The purpose of the DMMP is not to enhance fish habitat. However the issue of providing enhancements for migrating anadromous fishes was a very important consideration in the development of alternatives, consideration of existing environmental conditions and potential environmental effects of the alternatives, and development of proposed mitigation measures. Of note is the fact that several alternatives, including the preferred alternative, have as primary features dredged material management strategies that are specifically designed to provide enhancements for anadromous fishes. Further information on the Corps' efforts involving anadromous fish is available at the Walla Walla District's website:
www.nww.usace.army.mil/planning/ep/fishres/main.html

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 26
The estimated cost of the dredging project is at least $3/cubic yard for inwater disposal of dredged material. Costs would go up an estimated 3-4 times for disposal of dredged material in upland sites. We suggest that the final EIS improve its cost-benefit analysis of the dredge program. Because the pool is maintained by the Lower Granite project, each alternative, including the natural river alternative, should be economically assessed using local tax costs that support the waterways/ports, operation and maintenance for navigation, salmon migration, and occasional federal costs like lock repair. We recommend this analysis include the level and potential impacts of dredging required to catch up with shortfalls in the existing dredge program, potential mitigation for declining pool conditions because of sedimentation, and fish and wildlife benefit costs and risks.
Response
The purpose of the DMMP/EIS is to evaluate ways to maintain the authorized navigation channel in the lower Snake River and McNary Reservoirs and accommodate flow conveyance over the next 20 years. Navigation is a specific aspect of the stated purpose and need. True "natural river conditions" would not allow navigation and, therefore, are not consistent with the DMMP's purpose and need. Response to Save Our Wild Salmon comment 29 presents an analysis of the benefits and costs of the proposed system management, consistent with the stated purpose and need.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 27
The dredge program has been identifed as benefiting chinook salmon by providing critical shallow water habitats free from potential predators. While we believe some of these benefits are real, we ask that the EIS assess the availability of similar habitats under a natural river and without dredging the Lower Granite pool.
Response
The purpose and need of the DMMP/EIS is to evaluate dredging and dredged disposal management alternatives to maintain the navigation channel and flow conveyance in the lower Snake River and McNary Reservoirs. As such, creation of shallow-water habitat as a beneficial use of dredged material was evaluated. Evaluation of shallow-water habitat under a natural river scenario would not fulfill the stated purpose and need of the plan.

Organization
Idaho Department of Fish & Game, Clearwater Region
Comment 28
We request that the Idaho Department of Fish and Game be included on the Regional Dredging Team identified in the DMMP/EIS.
Response
Idaho Department of Fish and Game is included as a participant in the Local Sediment Management Group (formerly called the Regional Dredging Team) (see Section 1.8).

IDAHO DEPARTMENT OF PARKS AND RECREATION

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December 12, 2001

Richard P. Wagenaar
Lieutenant Colonel
Department of the Army
Walla Walla District, Corps of Engineers
201 North Third Avenue
Walla Walla, WA 99362-1876

Dear Lieutenant Colonel Wagenaar:

ATTN: Dredged Material Management Plan

The Idaho Department of Parks and Recreation would like to comment on the Draft Executive Summary for the above referenced plan and specifically on the dredging impacts at Hells Gate State Park.

The Corps' preferred alternative, Alternative 4, involves no significant change to the way the marina and the Snake River channel in front of the marina is currently dredged and managed. None of the proposed alternatives would negatively affect recreation at Hells Gate State Park. 1

It is our experience that on occasion the main river channel is dredged in front of the marina. We have dredged the mouth of the marina on an annual basis prior to redesigning the entrance. Since the redesign, we have not had to dredge in two years. We also have a need to dredge the actual marina when the sediment gets too deep for the boats to maneuver, and that occurs every several years. The current system of dredging is working adequately and enabling Hells Gate State Park to continue to provide river related recreational opportunities.

Thank you for the opportunity to comment.

Sincerely,

Rick Collignon, Director

G:/word/director/dredging.doc

Cc: John Crowe, Development Bureau Chief
Mike McElhatton, Park Manager, Hells Gate State Park
Rick Cummins, North Region Manager

O-28

Organization
Idaho State Parks and Recreation, Director
Comment 1
None of the proposed alternatives would negatively affect recreation at Hells Gate State Park.
Response
Your comment is noted.

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January 3, 2002

Dept of the Army
Walla Walla District
Corps of Engineers
ATTN: Dredged Material Management Plan
201 North Third Avenue
Walla Walla WA 99362-1876

Dear Sirs:

Thank you for the opportunity to comment on the draft environmental impact statement for the Dredged Material Management Plan (DMMP/EIS). We have reviewed the DMMP/EIS and have the following comment.

O-30

1 Upland placement of dredged materials will require a solid waste permit unless the materials meet the definition of "clean dredge spoils" under the applicable solid waste rule in effect at the time of placement. The current rule is Chapter 173-304 WAC. This is currently being amended and will change to Chapter 173-350 WAC.

If you have any questions, please contact Mr. Wayne Krafft with our Solid Waste and Financial Assistance Program at (509) 456-2995.

Sincerely,

Rebecca J. Inman
Environmental Coordination Section

EIS #017388

cc: Wayne Krafft, ERO
Heidi Scheibner, ERO

Organization
Sate of Washington Dept. of Ecology, Environmental Coordination Section
Comment 1
Upland placement of dredged materials will require a solid waste permit unless the materials meet the definition of "clean dredge spoils" under the applicable solid waste rule in effect at the time of placement.
Response
The Corps will assess the quality of dredged materials per the methods of the dredged materials evaluation framework. The Corps will comply will all applicable state and federal regulations regarding placement of the dredged materials if they do not meet "clean dredged spoils" definition.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

January 22, 2002

Department of the Army
Walla Walla District, Corps of Engineers
ATTN: Dredged Material Management Plan
201 North Third Ave.
Walla Walla, WA 99362-1876

Dear Sirs:

Please excuse the lateness of our comments; for a considerable time we could not connect with your WEB site in order to review all the Plan documents. In general, we believe the District has done an excellent job in developing and evaluating a 20-year Dredged Material Management Plan for the Snake and Mid-Columbia Rivers.

O-32

Specific Comment - Recommended Plan/Preferred Alternative: We concur that the Recommended Plan/Preferred Alternative is the most desirable from the perspective of using dredged material beneficially. However, we are concerned that the Plan does not provide for a
1 contingency in a worst case situation. As an example, a worst case situation could arise from the dredging of the confluence where the greatest volume of sediment is dredged on a frequent basis. We can envision a situation whereby the sediment proposed for dredging does not qualify for beneficial use because of an unexpected result of sediment chemistry or bioassays (or possibly a disagreement about what constitutes acceptable sediment quality for a beneficial use). At the same time, if a serious monetary deficit occurred in the Corps/District's O&M Program, there may not be sufficient funds to pay for a higher-cost upland disposal option. Given this scenario, the only feasible contingency would seem to place the dredged material at a deep water site, as provided for in the No Change Alternative. We view this scenario as unlikely, but given that the dredged material plan covers a lengthy period of 20 years, we believe it makes sense to retain all reasonable and prudent disposal options.

Sincerely,

Neil Aaland for Gordon White

Gordon White
Program Manager

Organization
Washington Department of Ecology
Comment 1
[W]e are concerned that the Plan does not provide for a contingency in the worst case situation. As an example, a worst case situation could arise from the dredging of the confluence where the greatest volume of sediment is dredged on a frequent basis. We can envision a situation whereby the sediment proposed for dredging does not qualify for beneficial use because of an unexpected result of the sediment chemistry or bioassays (or possibly a disagreement about what constitutes acceptable sediment quality for a beneficial use). At the same time, if a serious monetary deficit occurred in the Corps/District O&M Program, there may not be sufficient funds to pay for a higher-cost upland disposal option. Given this scenario, the only feasible contingency would seem to place the dredged material at a deep water site, as provided for in the No Change Alternative.

Response
Based upon review of sediment quality data and plans to regularly evaluate sediments throughout the term of the DMMP, the Corps believes the likelihood of encountering sediments that are unsuitable for beneficial uses in very low. Nonetheless, the DMMP provides the flexibility to place dredged materials upland if they are unsuitable for beneficial use. Upland disposal would also be used if dredging occurred in summer months, within the allowable parameters documented in the DMMP/EIS. The Corps' budgeting for dredged material management would be based on the conditions presented in the DMMP and would, therefore, involve commitments to manage dredged materials that are not suitable for beneficial uses consistent with the provisions of the DMMP. Ultimately, if dredged materials require upland disposal, the Corps would fund upland disposal, consistent with the DMMP.

State of Washington
DEPARTMENT OF FISH AND WILDLIFE
3030 West Clearwater, Suite 116, Kennewick, Washington 99336 - (509) 734-7432

January 4, 2002

U. S. Army Corps of Engineers
Walla Walla District
Attn: Dredged Material Management Plan/Mr. Jack Sands
201 North Third Avenue
Walla Walla, Washington 99362-1876

Dear Mr. Sands:

SUBJECT: Comments for U. S. Army Corps of Engineers Draft Environmental Impact Statement for the Dredged Material Management Plan for McNary Reservoir and Lower Snake River Reservoirs.

The Washington Department of Fish & Wildlife (WDFW) appreciates the opportunity to provide comments on the draft Environmental Impact Statement (EIS) for Dredge Material Management Plan (DMMP) in the Snake River and McNary Pool in the Columbia River. Our primary focus for comments is directed at fish impacts. The need to preserve, protect, and perpetuate anadromous fish, especially federal listed Threatened and Endangered Species (T & E) under the Endangered Species Act (ESA) is imperative.

WDFW reviewed the dredging material management alternatives carefully. We participated in a number of forums through the years to advise the U. S. Army Corps of Engineers (COE) from a State of Washington perspective on dredging activities. Recent science demonstrates how dredge material management along with fish management concepts change, mostly for the better. It's important to make the right management decisions the first time, unless the document is adopted with legal adaptive ongoing elements that allow the decision makers to utilize the latest and most useful science. It could become a working document. Creating a EIS that is the basis for making decisions for up to 72 years in the future is difficult. WDFW cautions the COE when adopting
1 dredge and dredge material management policies from this EIS DMMP that apply long term.

During previous dredge material management discussions, WDFW suggested alternatives that we believe are feasible, reasonable, and should be considered in detail: The flow management option of flushing Lower Granite pool whenever necessary to naturally move sediment rather than dredge. The draft EIS DMMP explains how effective the free-flowing reach carries suspended material.
2 Why not increase flows to simulate natural river conditions and naturally move suspended material?

O-34

2 cont. The draw down alternative in the DMMP is not the same as a flushing event. Additionally, the draw down alternative is not extensively addressed in the DMMP, so comparison is difficult. Is the draft EIS DMMP draw down alternative based on data from the 1992 draw down of Lower Granite pool? Keep in mind, the 1992 Snake River flow was an extremely low flow year and may not represent the type of flushing we're suggesting. An annual flushing event of Lower Granite pool should prevent sediment deposition. Flushing would also remove some existing deposits. It creates the type of river condition that simulates a natural high flow event.

There are numerous benefits to ESA listed fish species if flushing is conducted in concert with peak juvenile salmonid out migration. Under flood conditions juvenile salmonids utilize high turbidity to avoid predators. We know that the existing low flow reservoirs are a haven for predatory species. The increased velocity helps juvenile salmonids orient naturally and they leave the impounded areas sooner. Increased flows over and around the dam decreases mortality. The increased flow in the Lower Granite pool would provide a flow of water that is beneficial to salmonids throughout all the impounded waters of the lower Snake and Columbia River.

A flushing event can be limited to a short period of time when the natural high rate of sediment suspension and/or deposition occurs. Another option would be to pulse flushing events, (i.e., twice a year) that equals one large flushing event. The Lower Granite pool draw down could be limited to whatever level or period is necessary to move the sediment down river. In the draft EIS DMMP, the COE doesn't thoroughly address the draw down alternative. The 1992 draw down scenario (i.e., greater than 60 feet draw down) is probably not necessary. It may only require a 10 to 15 feet draw down to move the sediment. The appropriate level and method of draw down needs to be determined.

Most of the sediment would settle out in the deep water areas of the pool, which already has the capacity to hold another 120 million cubic yards of sediment. The draft EIS notes that 3.2 million cubic yards of sediment are deposited in the Lower Granite pool every year, and assuming less than full deposition under flushing conditions, that still provides 40 more years of natural conditions during out migration. That's also 40 years of cost savings because of limited dredging.

Economic impacts on commerce are important. Barge traffic would be impacted during this period. Although, the heaviest barge traffic is during or after agricultural harvests. The high flow period conducive to a flushing event is before harvest, typically during the month of May. Flushing is an alternative that may limit dredging needs in the Lower Granite pool, which would offset the economic impacts on commerce.

The draft EIS DMMP states that above 300,000 cfs, the COE predicts that elevation 738 cannot be maintained in the Lewiston area. The draft EIS notes though, that at least until 2020 the levee system will protect Lewiston during a 100-year flood event. If the COE manages the Clearwater

2 cont. River and Snake River confluence elevation by flushing they could extend the life of the current levee system.

WDFW would like the COE to evaluate the flushing alternative more extensively. We don't believe the draft EIS DMMP adequately addresses this as an alternative. Under the evaluation criteria for the draft EIS DMMP a flushing event would 1) lower dredging costs, 2) simulate natural river conditions, 3) be beneficial to juvenile salmonids, and 4) maintain flow conveyance of the Lower Granite reservoir.

Other general comments on the draft EIS DMMP:

Beneficial uses of dredge material - WDFW supports the concept of beneficial uses for the dredge material. The creations of shoreline or island habitat and covering rip rap shorelines followed by revegetation, are all good ideas. We're concerned that the preferred alternative selected by the COE, creates an underwater habitat that is not within the critical zone for juvenile salmonids, especially fall Chinook. It appears that because of logistics, the dredge material would be dumped only in depths greater than 10 feet. As Dr. Dave Bennett and colleagues from the University of Idaho point out, 10 to 20 feet depths are important, but the closer to shore, (i.e., zero to 10 feet depth) is more critical. The Centennial Island project demonstrates that fact. WDFW recommends that the COE address the zero to 10-foot depth zones in order to reestablish proper functioning near-shore habitat that is preferred by juvenile salmonids. How was the shoreline created at Centennial Island?

3

4 Another beneficial use of dredge material WDFW recommends is to cap or cover rip rap shoreline areas. As we discussed in the last regional dredge team advisory meeting, unless the COE takes the first step in capping rip rap areas, it is unlikely railroad companies or other jurisdictions will. There are plenty of groins and dikes along the Snake and Columbia Rivers that would lose very few functions if covered with dredge material and revegetated with woody vegetation. Structural integrity isn't threatened. Choices where views are not impacted are possible. Minimal maintenance by Park officials would promote woody plants that do not pipe through the structure. During a major flood event the vegetation acts to dissipate flood energy and prevent erosion. The vegetation also provides juvenile salmonids refuge for feeding and resting during high flow events.

5 Large Woody Debris - Managing large woody debris (LWD) within reservoirs is another issue that WDFW feels is neglected. It's linked to the draft EIS DMMP when beneficial uses of dredge materials are considered. If flushing is utilized as a management tool there will probably be LWD impacts in the Lower Granite forebay. WDFW prefers to leave LWD in the river system, but if removal is necessary it should be used for the benefit of fish. If shoreline restoration or covering rip rap areas are used as beneficial uses of dredge material, why not incorporate LWD to increase habitat complexity resulting in increased benefits to juvenile salmonids?

O-35

Levees - In general, WDFW opposes further levee construction, especially when there are alternatives that are more environmentally sound. Levees prevent naturally occurring flood plain functions, many of which are beneficial to fish. If levees are necessary, WDFW prefers setback

6 levees that enable the flood plain to function properly. Additionally, the COE and most local jurisdictions that lease the levee areas don't practice sound vegetation management along the

7 shoreline. The lessee and the COE vegetation removal policy and maintenance practice is in conflict with the restoration projects proposed under the beneficial use proposals in the draft EIS DMMP. Existing COE policy does not rely on science developed for the Snake River or Columbia River levee systems. They use Mississippi River science. It doesn't apply to our eastern Washington river systems. Northwest research exists and it contradicts the Mississippi River study. Identify the differences and communicate with the jurisdictions of responsibility, so that shoreline and vegetation restoration along the levees is not just short term and the beneficial uses are not eliminated.

The draft EIS DMMP states that the Lower Granite pool has the capacity to extend the life of the Lewiston levee until 2020. Why is there a proposal to start construction in 2005? If necessary, we

8 suggest the COE adopt an adaptive management approach to building this levee. Either conduct a more timely EIS (say in 2015), or wait for better scientific methods to evaluate impacts.

Hydraulic Dredging - With regards to hydraulic dredging, WDFW is reluctant to agree to this method of dredging. As proposed in the draft EIS DMMP, small-scale hydraulic dredging may be

9 appropriate if reviewed on a case-by-case basis. WDFW would request monitoring of each hydraulic project for juvenile fish mortality. Federal and state listed species should be the primary concern, although other species should be monitored also. If monitoring results demonstrate no mortality impacts on juvenile salmonids then further use of the hydraulic method might be considered.

Sediment traps - WDFW agrees that is not a viable alternative.

In-Water Work windows - Work windows identified for the Snake River are similar to the State of Washington. Work windows identified for the Columbia River conflict during the month of March.

10 Recent research indicates juvenile fall Chinook emergence is well underway by March 1 within the McNary pool. With a few minor exceptions, and because of fish impacts, WDFW doesn't authorize any in-water projects beyond March 1 within the McNary Pool. WDFW remains flexible during low flow periods of the summer. A minor work window exists for August, but projects have been permitted from mid July to mid September depending on in-season variables and fish impacts.

Local Sediment Management Group (LSMG) - This is a good idea if the LSMG is well informed,

11 local jurisdictions provide regular input, and the advice from the group is followed.

12 **Washington State Hydraulics Code (RCW 77.55.100) -** WDFW requires a Hydraulic Project Approval (HPA) permit for any work conducted in waters of the State of Washington. Any dredging related activity, including beneficial uses, and levee construction, requires a HPA permit either for the COE or the contractor conducting the work.

Thank you for the opportunity to provide this information. WDFW intends to continue participation in the LSMG. We'll provide the technical support to the LSMG on issues and projects that address both short and long term fish and wildlife management options. Hopefully, the final EIS DMMP will be as complete as possible in assessing the needs and benefits for the fish and wildlife associated with dredge activities in the Snake and Columbia River. WDFW appreciates the COE efforts regarding this project. If you have any questions, please call me at 509 734-7432.

Sincerely,

Paul E. LaRiviere

Paul E. LaRiviere
Area Habitat Biologist
larivpel@dfw.wa.gov

cc: Grandstaff, WDFW, Region 1
Robinette, WDFW, Region 1
Maher, Ecology, Spokane
Gullet, NMFS, Ellensburg
Volkman, CTUIR
Mendel, WDFW, Region1
Burkle, WDFW, Region 6
Hansen, Idaho Fish & Game, Lewiston
Erkel, COE, Spokane

O-36

Organization
State of Washington Dept. of Fish and Wildlife, Area Habitat Biologist
Comment 1
WDFW cautions the COE when adopting dredge and dredge material management policies from this EIS DMMP that apply long term.
Response
Your comment is noted.

Organization
State of Washington Dept. of Fish and Wildlife, Area Habitat Biologist
Comment 2
WDFW would like the COE to evaluate the flushing alternative more extensively. We don't believe the draft EIS DMMP adequately addresses this alternative. The draft EIS DMMP explains how effectively the free-flowing reach carries suspended material. Why not increase flows to simulate natural river conditions and naturally move suspended material? The draw down alternative in the DMMP is not the same as a flushing event. Additionally, the draw down alternative is not extensively addressed in the DMMP, so comparison is difficult. The appropriate level and method of draw down needs to be determined and explained. There are numerous economic, ecological, and logistical benefits that could accrue from each of these additional alternatives, and as such both should be treated in the DMMP/EIS.
Response
The drawdown of the reservoir of 10 to 15 feet during the annual flood season and smolt outmigration has some potential. One of the major drawbacks of drawing the reservoir down to that degree during the fish outmigration period would be the rendering of the juvenile fish passage system at Lower Granite Dam as unusable. There are two alternatives for fish passage without the juvenile bypass systems, turbines and the spillway.

For turbine passage, the traveling screens could be pulled, and fish would pass through the turbine, with possibly higher than desired mortality rates. In addition, a large number of fish would be trapped in the gatewells with no opportunity for exit, and a great number could eventually die there. Although a lift tank was tested in 1994 for removal of fish from gatewells (Swan et al. 1994), up to 18 would need to be constructed at a cost that may exceed the dredging costs for the 20-year course of action. Another alternative would be to periodically dip gatewells and put fish in trucks for transporting downstream. Gatewell residence time, however, also plays a factor in that depending on the gatewell environment, conditions for fish can be detrimental if fish spend too long in there.

If an all-spillway route were determined to be the most appropriate passage route, with no powerhouse operation, a large eddy would be set up in the tailrace of the dam. A predator study (Bjornn and Piaskowski 1999) showed that during spill operations, predators in the tailrace of Lower Granite Dam tended to seek out the lower velocity areas (although this study mentioned spill on, versus spill off without regard to powerhouse operations). If an eddy is set up, it has the potential to continually cycle juvenile fish within the eddy and constantly expose them to more predators. Only a few minutes of migration delay were seen in the Ice Harbor Dam tailrace (Eppard et al, 1999) for fish spilled during high and 100% spill scenario. However, some fish that passed during these scenarios did experience longer tailrace residence times (Eppard –NMFS-Personal Communication, 2002).

In addition, spawning migrations of fish into Alpowa Creek may be blocked by drawdown

operations. Rearing areas important to fall chinook and sturgeon would be rendered less usable if drawdown occurred. Invertebrates that use the Port of Wilma, Centennial Island and other known shallow water rearing areas would be desiccated and would provide little to no benefit to fish rearing in the area either during drawdown or after water up. Bennett (1995) demonstrated that after the drawdown event, smallmouth bass changed their predation targets, from preying on primarily crayfish to a diet composed of more juvenile salmonids. This was due primarily to the reduction in the number of invertebrate species caused by the drawdown. Because these invertebrate species would be negatively affected, other species that prey on them including white sturgeon, channel catfish and other predatory species all have the potential to change predation targets and negatively affect salmonid smolts. Disruption of the food web on a repetitive basis would cause overall detrimental effects to the limnological characteristics of the reservoir.

For further details on seasonal drawdowns, see the System Configuration Study, Phase II, Lower Snake River Juvenile Salmon Migration Feasibility Study: Interim Status Report, December 1996 (incorporated by reference). Also see response to Idaho Department of Fish and Game comment 2.

Organization
State of Washington Dept. of Fish and Wildlife, Area Habitat Biologist
Comment 3
We're concerned that the preferred alternative selected by the COE, creates an underwater habitat that is not within the critical zone for juvenile salmonids, especially fall chinook. WDFW recommends that the COE address the zero to 10-foot depth zones in order to reestablish proper functioning near-shore habitat that is preferred by juvenile salmonids.
Response
The 10-foot depth was chosen for two reasons. The first reason was the cost and logistics of depositing the material. The second reason was that this depth is within the photic zone and is, therefore, conducive for productivity of plankton and invertebrates, and feeding for fall chinook. A shallower depth is possible but would also be more expensive.

Other programs in the Walla Walla District are currently addressing the issue of trees in the riparian area, specifically the Woody Riparian Habitat Project, a component of the Lower Snake River Compensation Plan. It is possible to use dredged material to create shallow water areas or cover riprap in conjunction with the Woody Riparian Habitat Project. One of the major issues, however, is that the Corps must plan dredged material disposal in areas where cultural resources will not be impacted. This may limit the amount and the continuity of habitat the Corps can create. In addition, railroad berms and levies are often quite steep and may not be conducive to holding sediment in place, also losing the continuity of habitat and creating sedimentation problems further downstream. Although the riprap habitat produces invertebrates for fish to eat, the variation of habitat versus a single type of habitat could be a benefit.

Organization
State of Washington Dept. of Fish and Wildlife, Area Habitat Biologist
Comment 4
Another beneficial use of dredge material WDFW recommends is to cap or cover rip-rap shoreline areas.
Response

It is possible to use dredged material to create shallow water areas or cover as a beneficial use of dredged material. One criteria used for selecting areas for beneficial uses of dredged material must be planned in areas where cultural resources and threatened and endangered fish species would not be adversely affected. This may limit the amount and the continuity of habitat the Corps can create. In general, the stability of dredged material placed on shoreline areas is a concern as water velocities along rip-rapped shoreline may be too great to ensure dredged material and plantings remain over the rip-rap. In addition, rip-rapped slopes are often quite steep and may not be conducive to holding sediment in place, which in turn could lead to the loss of continuity of habitat and/or creating sedimentation problems further downstream. These considerations would need to be carefully evaluated in beneficial use of dredged material that may include covering rip-rap on shoreline areas.

Although the riprap habitat produces invertebrates for fish to eat, the variation of habitat versus a single type of habitat could be a benefit. The Local Sediment Management Group provides a forum for identifying opportunities and local sponsors for potential placement of dredged materials over riprap to create viable shoreline habitat.

Organization
State of Washington Dept. of Fish and Wildlife, Area Habitat Biologist
Comment 5
Large Woody Debris - Managing large woody debris (LWD) within reservoirs is another issue that WDFW feels is neglected. It's linked to the draft EIS DMMP when beneficial uses of dredge materials are considered. If flushing is utilized as a management tool there will probably be LWD impacts in the Lower Granite forebay. WDFW prefers to leave LWD in the river system, but if removal is necessary it should be used for the benefit of fish.
Response
Other programs in the Walla Walla District are currently addressing the issue of trees in the riparian area, specifically the Woody Riparian Habitat Project, a component of the Lower Snake River Fish and Wildlife Compensation Plan. It is possible to use dredged material to create shallow water areas or cover riprap in conjunction with the Woody Riparian Habitat Project (see response to Comment 4).

Large woody debris (LWD) is often used in stream habitat restoration plans, many times in the form of engineered logjams. Some of the functions of these logjams include restoring habitat by creating cover and by attempting to accrete sedimentary materials and, thus, help to stabilize banks and reduce erosion. One of the key components required for LWD to work is sufficient flow. In the reservoir system, even at high flows, the water velocities in most of the areas are not fast enough to accrete anything more than fine material behind the logjam or LWD. There are no specific plans to introduce LWD in association with the Woody Riparian Habitat Program. However, with the Woody Riparian Habitat Project, LWD may eventually begin accruing along the shoreline.

In addition, the use of LWD in a warm water system versus a coldwater system may result in the replacement of salmonid habitats with introduced species, namely predators. Bennett et. al. (1995) demonstrated at Centennial Island that the riprap on the riverside of the island tended to concentrate more predators than the sand areas. Caution should be given to the addition of structures into the system which may have the potential to increase introduced species of structure-oriented piscivores (including smallmouth bass and bass crappie which prey on juvenile salmonids) to accumulate in these areas and create concentrations of predators along the

shorelines, thus being detrimental to salmonid populations.

Organization
State of Washington Dept. of Fish and Wildlife, Area Habitat Biologist
Comment 6
In general, WDFW opposes further levee construction, especially when there are alternatives that are more environmentally sound. Levees prevent naturally occurring flood plain functions, many of which are beneficial to fish. If levees are necessary, WDFW prefers setback levees that enable the flood plain to function properly.
Response
No new levees or linear expansion of existing levee systems are proposed as part of the DMMP. The existing Lewiston levees are an essential part of Lower Granite Project. Given surrounding land uses, it is not practical to move those or new levees back. If those levees were to be setback, the change in flood plain area would be so small that there would be no measurable change in function.

Organization
State of Washington Dept. of Fish and Wildlife, Area Habitat Biologist
Comment 7
[T]he COE and most local jurisdictions that lease the levee areas don't practice sound vegetation management along the shoreline. The lessee and the COE vegetation removal policy and maintenance practice is in conflict with the restoration projects proposed under the beneficial use proposals in the draft EIS DMMP. Existing COE policy does not rely on science developed for the Snake River or Columbia River levee systems.
Response
Proposed planting benches at the toe of the levee would not conflict with the Corps' vegetation removal policy. Trees and shrubs would be planted no closer than five feet from the levee toe. Some planting in shoreline areas would be possible as part of the beneficial uses considered in the DMMP. In general, the Walla Walla District manages vegetation on levees within its jurisdiction in an environmentally sound manner consistent with the project purposes. In addition, levee maintenance and beneficial use of dredged material are not the same programs. Some vegetation removal from levee faces is necessary. Vegetation growing on benches off the base of the levee is not targeted for removal. Dredged material can be used to extend existing benches or create new benches that could support riparian vegetation.

Organization
State of Washington Dept. of Fish and Wildlife, Area Habitat Biologist
Comment 8
We suggest the COE adopt an adaptive management approach to building this levee. Either conduct a more timely EIS (say in 2015), or wait for better scientific methods to evaluate impacts.
Response
The Corps proposes to employ an adaptive management approach to the implementation of DMMP. With respect to the proposed levee modification, however, the Corps has conducted economic (benefit/cost) analyses of the flow conveyance measures. These analyses indicate that the greatest benefits (in terms of avoided damages) would be realized if the levee raise were

constructed as soon as is practicable.

Organization
State of Washington Dept. of Fish and Wildlife, Area Habitat Biologist
Comment 9
With regards to hydraulic dredging, WDFW is reluctant to agree to this method of dredging. As proposed in the draft EIS DMMP, small-scale hydraulic dredging may be appropriate if reviewed on a case by case basis. WDFW would request monitoring of each hydraulic project for juvenile fish mortality. Federal and state listed species should be the primary concern, although other species should be monitored also. If monitoring results demonstrate no mortality impact on juvenile salmonids then further use of the hydraulic method might be considered.
Response
As proposed under the DMMP, hydraulic dredging would be employed in very limited and specific instances (see Section 2.8.1 of the DMMP/EIS). Any hydraulic dredging would be undertaken within the conditions of NMFS' Biological Opinion. Biological monitoring of the hydraulic dredging, if employed, would be performed. See Appendix M (Monitoring Program).

Organization
State of Washington Dept. of Fish and Wildlife, Area Habitat Biologist
Comment 10
Work windows identified for the Columbia River conflict during the month of March. Recent research indicates juvenile fall chinook emergence is well underway by March 1 within the McNary Pool. With a few minor exceptions, and because of fish impacts, WDFW doesn't authorize any in-water projects beyond March 1 within the McNary Pool. WDFW remains flexible during low flow periods of the summer.
Response
The Corps is not aware of any information of eggs of fall chinook salmon incubating in the McNary Pool. The Corps does recognize, however, that the areas considered for dredging in McNary Pool all have the potential for salmon rearing, based on Easterbrooks studies in Casey Pond. Although the Corps can attempt to avoid working in March, the negotiated agreement for in-water work windows was established with NMFS, The US Army Corps of Engineers - Seattle Regulatory, and the US Fish and Wildlife Service (Special Public Notice, Final Regional Conditions, 401 Water Quality Certification Conditions, Coastal Zone Management Consistency Responses, for Nationwide Permits for the Seattle District Corps of Engineers for the State of Washington, 16 June 2000).

Organization
State of Washington Dept. of Fish and Wildlife, Area Habitat Biologist
Comment 11
LSMG - This is a good idea if the LSMG is well informed, local jurisdictions provide regular input, and the advice from the group is followed.
Response
The Corps intends to keep the LSMG informed and the consider recommendations from the group when making decisions about dredging and sediment management.

Appendix O
Response to Comments

Organization
State of Washington Dept. of Fish and Wildlife, Area Habitat Biologist
Comment 12
WDFW requires a Hydraulic Project Approval (HPA) permit for any work conducted in waters of the State of Washington. Any dredging related activity, including beneficial uses, and levee construction, requires a HPA permit either for the COE or the contractor conducting the work.
Response
The Corps will consider WDFW comments on all dredging related activities, however, the Corps disagrees that the Corps or Corps' contractors are required to obtain a Washington State HPA permit for work on Corps' projects. The Corps does, however, comply with all applicable state laws and regulations. As part of the pre-contract environmental compliance review, the Corps will coordinate with regulatory agencies, including WDFW.

Final DMMP/EIS
July 2002
U.S. Army Corps of Engineers
Walla Walla District

Washington State Department of Transportation
Douglas B. MacDonald
Secretary of Transportation

South Central Region
2809 Rudkin Road, Union Gap
P.O. Box 12560
Yakima, WA 98909-2560

509-577-1600
TTY: 1-800-833-6388
www.wsdot.wa.gov

January 7, 2002

Department of the Army
Walla Walla District Corps of Engineers
Attention: Dredged Material Management Study
201 North Third Avenue
Walla Walla, Washington 99362-1876

Attention: Jack Sands

Subject: U.S. Army Corps of Engineers, Walla Walla District
Dredged Material Management Plan
SR 129

On November 13, 2000, we commented on the Environmental Assessment (October, 2000) for the Corps' Interim Lower Snake, Clearwater, and Mid-Columbia Rivers Dredging. Part of the Environmental Assessment proposes dredging at the confluence of the Snake and Clearwater Rivers in the Lewiston, Idaho/Clarkston, Washington area, but made no mention of the possibility of raising the profile of State Highway 129, or any other direct impacts to the state highway system. Recently, we discovered that Alternatives 2, 3, and 4 of a proposed dredging plan by the Corps would involve raising SR 129. This was not part of the October 2000 proposal. Since our November 13, 2000 letter, we have not received any notice from the Corps of any changes to the proposal. We would like to offer the following general comments at this time.

1. 1. Alternatives 2, 3, and 4 would significantly impact the state highway system by raising SR 129. Raising SR 129 would cause a number of short-term impacts during construction. Traffic would have to be re-routed during construction, and all the existing intersections and driveway approaches would need to be modified (or possibly reviewed for elimination). The proponent will be responsible for all costs associated with raising SR 129.

2. 2. Any proposed use of dredged material for a roadway base for any state highways would need to be reviewed and approved by WSDOT.

3. 3. As stated in our previous letter, we prefer any dredged material that can be transported by the inland waterway system to utilize that means without using and impacting the state highway system.

O-40

4. 4 If there will be any oversized equipment or overweight material hauls on WSDOT-maintained rights-of-way, the applicant must obtain the appropriate permit from WSDOT prior to transporting any of these hauls. Also, it will be the applicant's responsibility to keep and maintain the state highways, including any interchanges, free of any of their debris or hazardous material. Any spilled material shall be cleaned up at the applicant's expense.

WSDOT would like to work with the U.S. Army Corps of Engineers concerning the specifics of any proposal affecting SR 129, or any other impacts to our state highway system. Thank you for the opportunity to review and comment on this proposed project. If you have any questions concerning our comments, please contact me at (509) 577-1630.

Sincerely,

Troy A. Suing, P.E.
Regional Planning Engineer

TAS: rh/jjg

cc: File #3, SR 129
Gary Boeman, Environmental Program Manager
Bob Martin, Area 4 Maintenance Superintendent

p:\planning\drivers\sues_usarcorpsengr_sr129 dredging plan.doc

Organization
WSDOT South Central Region
Comment 1
Alternatives 2, 3, and 4 would significantly impact the state highway system by raising SR 129.
Response
The raising of SR 129 would require the temporary re-routing and reconnection of existing intersections and driveway approaches that are described in the comment. The specifics and plans for these roadway activities would be coordinated with WSDOT. The cost of these connections would be a part of the levee raise project cost and be borne by the Corps of Engineers.

Organization
WSDOT South Central Region
Comment 2
Any proposed use of dredged material for a roadway base for any state highways would need to be reviewed and approved by WSDOT.
Response
The use of dredged material for a roadway base is not being considered for any currently proposed roadwork. If the roadway being considered for a dredge material beneficial use were a Washington State highway, federal specifications and WSDOT requirements would need to be considered when developing plans for constructing such a roadway base.

Organization
WSDOT South Central Region
Comment 3
We prefer any dredged material that can be transported by the inland waterway system to utilize that means without using and impacting the state highway system.
Response
Wherever possible, the preferred plan uses barge transport of dredged material. The state highways would only be used when a specific beneficial use of dredged material requires overland transport that cannot be done by any other method than truck haul. Each plan that would require such a truck haul would be coordinated with WSDOT before the plan is finalized and construction is initiated.

Organization
WSDOT South Central Region
Comment 4
If there will be any oversized equipment or overweight material hauls on WSDOT-maintained rights-of-way, the applicant must obtain the appropriate permit from WSDOT prior to transporting any of these hauls. Also, it will be the applicant's responsibility to keep and maintain the state highways, including any interchanges, free of any of their debris orhazardous material. Any spilled material shall be cleaned up at the applicant's expense.
Response
The provisions stated in the comment would be reviewed with WSDOT when a truck haul over state highways is required to support the beneficial use(s) of dredged material. All applicable

permits and requirements will be discussed with WSDOT, addressed in the plans and contracts, and permits obtained before the truck haul begins.

STATE OF WASHINGTON
WASHINGTON STATE PARKS AND RECREATION COMMISSION
7150 Cleanwater Lane • P.O. Box 42650 • Olympia, Washington 98504-2650 • (360) 902-8500
Internet Address: http://www.parks.wa.gov
TDD (Telecommunications Device for the Deaf): (360) 664-3133

January 7, 2002

Mr. Jack Sands, Project Manager
U.S. Army Corps of Engineers
Walla Walla District
201 North 3rd Avenue
Walla Walla, WA 98362-1876

Subject: **Draft Dredged Material Management Plan and Environmental Impact Statement – McNary Reservoir and Lower Snake River Reservoirs**

Dear Mr. Sands:

I am writing in response to the Draft Dredged Material Management Plan and Environmental Impact Statement for the McNary Reservoir and Lower Snake River Reservoirs (DEIS). After reviewing the DEIS State Parks has the following comments.

Recreational Dredging

1 The U.S. Army Corps of Engineers (Corps) has identified long-term dredging activities adjacent to state parks located on the Snake and Columbia Rivers on plates 5, 11, 13, and 17 of the DEIS. However, dredging specifications are vague in regards to existing facilities at each respective site. Although the DEIS states each alternatives ability to maintain use of existing recreational facilities, State Parks is unsure whether dredging activity at respective parks includes areas necessary to maintain existing recreation. In particular:

2 *Plate 5, Sacajawea State Park*: it is difficult to ascertain whether dredging activity will include the existing boat basin, boat moorage area, and the area from the boat basin to confluence with the Columbia River. Dredging of these areas is necessary to maintain recreational use of the Sacajawea State Park water access site.

3 *Plate 13, Central Ferry State Park*: has the Corps considered access to the Central Ferry State Park Boat Basin? Parks dredged the boat basin area 10 years ago, and believes that future dredging may be required due to sediment transportation from the creek emptying into the basin.

4 Plate 17, Chief Timothy State Park the water access facilities for the park are located at the west end of Silcott Island. However, there is no dredging location identified west of the island. In order to assure recreational access to Chief Timothy State Park, the west end of the island should be dredged.

State Parks requires a minimum depth of three feet, Minimum Operating Pool, although a four foot depth is preferred, to provide access for recreational watercraft to boat launches, as well as temporary and overnight moorage facilities. If the Corps has completed

5 soundings analysis indicating a three foot minimum depth will not be maintained in these areas during the life of your proposed dredged material management plan, State Parks would like to work with the Corps to address Parks' recreational facilities in your DEIS.

Lyon's Ferry HMU

6 The DEIS states that upland disposal activities would have long-term, minor, indirect effects on Lyon's Ferry State Park, but fails to identify what the effects may be. Parks is concerned that unmanaged upland disposal would create particulate and noxious weed impacts on Lyon's Ferry State Park due to the prevailing wind direction. Without further mitigation, Parks believes that the lack of dust and noxious weed containment at the Lyon's Ferry HMU may create a major, direct impact on Lyon's Ferry State Park. Because specific measures to mitigate such impacts are not included in the DEIS, State Parks cannot adequately address these concerns.

We look forward to working with the Corps to enhance recreational opportunities at recreational access sites and to minimize impacts to recreation land and park users. If you would like to discuss issues identified in this letter further, please feel free to contact me at (360) 902-8632. Thank you for your time.

Sincerely,

Chris Regan

Chris Regan, Environmental Specialist,
Environmental Program

O-42

cc: Reade Obern, Sacajawea State Park Manager
Mark Truitt, Lyon's Ferry State Park Manager
Bill Byrne, Central Ferry State Park Manager
Thomas Pew, Chief Timothy State Park Manager
Jim Harris, Eastern Region Manager
Tom Ernsberger, Eastern Region Steward
Marlea Haugen, Maintenance Chief
James Horan, Boating Program Manager
Bill Jolly, Environmental Program Manager
Bill Frazier, Eastern Region Planner
Mark Schulz, Eastern Region Environmental Specialist
Tony Raposo, Eastern Region Engineering Field Office Manager

Organization
Washington State Parks and Recreation Commission, Environmental Program
Comment 1
The US ACE has identified long-term dredging activities adjacent to state parks located on the Snake and Columbia Rivers on plates 5, 11, 13, and 17 of the DEIS. However, dredging specifications are vague in regards to existing facilities at each respective site. Although the DEIS states each alternative's ability to maintain use of existing recreational facilities, State Parks is unsure whether dredging activity at respective parks includes areas necessary to maintain existing recreation.
Response
The Corps has not completed soundings specifically for Washington State Parks' facilities in the study area. The Corps can accommodate non-Federal dredging on a cost-reimbursable basis, such as that requested by Washington State Parks, and will coordinate with Washington State Parks as the DMMP is implemented. The only recreational facilities that would be dredged in the short term are described in Section 2.8 of the DMMP/EIS.

Organization
Washington State Parks and Recreation Commission, Environmental Program
Comment 2
Plate 5, Sacajawea State Park: It is difficult to ascertain whether dredging activity will include the existing boat basin, boat moorage area, and the area from the boat basin to confluence with the Columbia River. Dredging of these areas is necessary to maintain recreational use of the Sacajawea State Park water access site.
Response
Plates 2-17 have been updated to better illustrate potential dredging locations. The maps do not necessarily show all of the locations that may be dredged as some areas may not be identified until sometime in the future. The boundaries of the potential dredging locations are not to scale and do not reflect exactly what area may be considered for dredging in the future.

Also see response to comment 1.

Organization
Washington State Parks and Recreation Commission, Environmental Program
Comment 3
Plate 13, Central Ferry State Park: Has the Corps considered access to the Central Ferry State Park Boat Basin?
Response
See response to comment 1.

Organization
Washington State Parks and Recreation Commission, Environmental Program
Comment 4
Plate 17, Chief Timothy State Park: The water access facilities for the park are located at the west end of Silcott Island. However, there is no dredging location identified west of the island. In order to assure recreational access to Chief Timothy State Park, the west end of the island should

be dredged.
Response
See response to comment 1. The Corps can incorporate non-Federal dredging into its overall dredging plan (non-Federal dredging would be done on a cost-reimbursable basis), and will coordinate with Washington State Parks and other recreation agencies as the DMMP is implemented in order to identify non-Federal dredging that may be needed at recreation facilities.

Organization
Washington State Parks and Recreation Commission, Environmental Program
Comment 5
If the Corps has completed soundings analysis indicating a three foot minimum depth will not be maintained in these areas (recreational boat launches and moorage facilities) during the life of your proposed dredged material management plan, State Parks would like to work with the Corps to address Parks' recreational facilities in your DEIS.
Response
See response to comment 1.

Organization
Washington State Parks and Recreation Commission, Environmental Program
Comment 6
The DEIS states that upland disposal activities would have long-term, minor, indirect effects on Lyon's Ferry State Park, but fails to identify what the effects may be. Parks is concerned that unmanaged upland disposal would create particulate and noxious weed impacts on Lyon's Ferry State Park due to the prevailing wind direction. Without further mitigation, Parks believes that the lack of dust and noxious weed containment at the Lyon's Ferry HMU may create a major, direct impact on Lyon's Ferry State Park. Because specific measures to mitigate such impacts are not included in the DEIS, State Parks cannot adequately address these concerns.
Response
The anticipated effects of upland disposal at the Joso site were largely associated with the development and disposal activities that would take place at that site (e.g., noise, visual impacts, etc.). The Corps does not propose to conduct any "unmanaged disposal" of dredged materials at this site. Dredged materials that would be placed at the site would be wet and therefore would not be likely to cause windblown dust issues at the time of placement. In addition, as outlined in Appendix D of the Draft DMMP/EIS, the site would be restored by placing six inches of topsoil on final slopes, re-seeding the area as part of a continuing restoration program, installing a temporary irrigation system to establish vegetation growth as needed, and re-establishing vegetation similar to plant species present in the surrounding areas. The Corps would monitor the site during use and restoration of the site to minimize fugitive dust to the extent practicable. The Corps would also coordinate with Washington State Parks to ensure noxious weed concerns were addressed if this alternative were pursued.

City of Clarkston
City Hall: (509) 758-5541 • Police: (509) 758-1684 • Fire: (509) 758-8681 • Fax: (509) 758-1670
830 Fifth Street • Clarkston, WA 99403

December 27, 2001

Department of the Army
Walla Walla District, Corps of Engineers
ATTN: Dredged Material Management Plan
2001 North Third Avenue
Walla Walla, WA 99362-1876

RE: Comments to the Dredged Material Management Plan

Dear Sirs:

Thank you for a copy of the Executive Summary of the Dredged Material Management Plan and Environmental Impact Statement of McNary Reservoir and Lower Snake River Reservoirs. Specifically regarding your recommended/preferred alternative #4, Maintenance Dredging and with Beneficial Use of Dredged Material and a 3-foot (0.9-m) Levee Raise, the City of Clarkston has the following comments.

1 The City of Clarkston is of the opinion there are potential impacts that should be considered in evaluating the effect of a water level increase. A change in water level could impact the physical hydraulic carrying capacity of the City of Clarkston wastewater outfall facilities and additional silt buildup could affect the diffuser structures. The same holds true for the City of Clarkston storm water collector system.

The City of Clarkston respectfully requests that you consider the potential impact on these items if you are seriously considering raising the level of the Lower Granite pool.

If you have any question, please don't hesitate to call. Thank you for the opportunity to respond to your recommendation.

Very truly yours,

Mark A. Kammers
Mayor

THE CITY SIN.

O-45

Organization
City of Clarkston, Mayor
Comment 1
The City of Clarkston is of the opinion that there are potential impacts that should be considered in evaluating the effect of a water level increase. A change in water level could impact the physical hydraulic carrying capacity of the City of Clarkston wastewater outfall facilities and additional silt buildup could affect the diffuser structures. The same holds true for the City of Clarkston storm water collection system.
Response
The proposed levee provides for increased pool elevation during extreme flood events, and thus provides conveyance while maintaining a designed level of protection. The normal pool operating elevation would not increase as a result of the proposed levee raise.

During normal operating conditions, the water level would remain at its current elevation, so there would be no increased head and thus no increased infiltration. Infiltration could occur during high-flow (i.e., flood) events, such as the 100-year flood or the standard project flood. Flood events provide a temporary condition in which infiltration could occur, and as such, are not expected to result in substantial amounts of infiltration. No specific evaluations of potential changes in infiltration rates associated with the proposed levee raises were conducted. However, the pump stations behind the levee system are designed for the 100-year storm water event and are anticipated to be adequate to control infiltration associated with flood events. Additional stormwater flow from flood infiltration to the storm water pumping system is anticipated to be minimal.

With the proposed levee raise, there would be no increase in the reservoir pool elevation or fluctuations under normal operating conditions. The pool elevations will be maintained between 733 and 738 feet above mean sea level, as has been done historically. Under extremely high flows, such as near the standard project flood flows, the water surface elevation would be higher during the flood peak. The City of Clarkston's facilities would not be adversely impacted by the proposed levee raise because normal operating pool elevations would not change, and high flow events would be relatively short in duration.

City of Lewiston
IDAHO'S ONLY SEAPORT
POST OFFICE BOX 617 • LEWISTON, IDAHO 83501
(208) 746-3671

January 7, 2002

Department of the Army
Walla Walla District, Corps of Engineers
Attn: Dredge Material Management Plan
201 North Third Avenue
Walla Walla, WA 99362-1876

Dear Lt. Col. Wagenaar:

The City of Lewiston has reviewed the draft Dredged Material Management Plan and Environmental Impact Statement, as well as attended the public meeting on the proposed alternatives and recommended option. We have the following concerns:

1. Alternative 4, the preferred alternative, calls for raising a portion of the Lewiston Levee by three feet. We are opposed to raising the levee system. We believe that raising the levee will cause additional sedimentation and over time will require additional dredging for recreational sites. We believe the DMMP/EIS should provide additional analysis of navigation, recreation, and economic impacts to Lewiston and Clarkston of raising the levee before a preferred alternative is identified.

2. Levee construction is scheduled to begin after 2005. While we oppose this alternative, we would point out that should any construction take place, it should be postponed until after 2006 to ensure that the construction is not in conflict with the Lewis-Clark Bicentennial.

O-47

Thank you for the opportunity to comment on the DMMP/EIS.

Sincerely,

Janice Vassar
City Manager

cc: Honorable Mayor and City Council
Joel Ristau, Public Works Director
Lynn Moss, Parks & Recreation Director
Bob Bushfield, Community Development Director
File

TREE CITY USA

Organization
City of Lewiston, City Manager
Comment 1
We are opposed to raising the levee system. We believe that raising the levee will cause additional sedimentation and over time will require additional dredging for recreation sites.
Response
The proposed levee raise would provide protection for Lewiston / Clarkston from major flood events as a result of ongoing sedimentation. The proposed levee raise would not affect the current pool elevation or sedimentation rates. Due to ongoing sedimentation, future dredging would be required to maintain sites outside of the Federal navigation channel (such as recreation sites) with or without the proposed levee raise. The levee plan was developed in conjunction with the reduced sediment removal and is expected to provide the desired conveyance and level of flood protection through the year 2074. The need for levee raises will be re-evaluated after 2074 based on conditions at that time. The Corps will have a on-going dialogue with the ports on the lower Snake River and McNary Reservoirs to address concerns regarding dredged material management, sedimentation, and flow conveyance. This dialogue will include the Local Sediment Management Group.

Organization
City of Lewiston, City Manager
Comment 2
We believe the DMMP/EIS should provide additional analysis of navigation, recreation, and economic impacts to Lewiston and Clarkston of raising the levee before a preferred alternative is identified.
Response
The Corps believes its analyses of issues relating to navigation, recreation, and economic impacts (as well as other environmental and socio-economic issues), are thorough and sufficient to use in the selection of a preferred alternative. Regarding navigation, there would be no effects from adopting the preferred alternative, compared to not adopting the alternative. Effects of all alternatives, as well as public input, were evaluated thoroughly during the process of selecting a preferred alternative. There would be no interruption of navigation for dredging or levee raise construction.

Recreational and economic effects were analyzed in Chapters 1,3, and 4, and Appendix C of the DMMP/EIS. Although recreation along the walking paths would be interrupted temporarily, due to the temporary nature of the anticipated impacts, the proposed actions would not significantly disrupt recreation or other nearby recreation facilities in the Lewiston/Clarkston area. The regional economic impacts of the construction activity are expected to be positive, as the proposed construction would result in increased regional jobs and procurements of equipment and materials.

Organization
City of Lewiston, City Manager
Comment 3
Should any construction take place, it should be postponed until after 2006 to ensure that the construction is not in conflict with the Lewis-Clark Bicentennial.

Response
The Corps' economic analysis of the levee modification indicates that the greatest benefits would be realized if the levee raise were constructed as soon as is practicable. However, the Corps expects to make a final determination about implementing the recommended levee raise after the results of the 2005 system biological checkpoint have been evaluated. If structural modifications to the lower Snake River dams have been successful in contributing to an improved adult return rate, and the intervening sediment accumulation has continued current trends, the Corps would make a decision to implement the levee raise alternative feature of the recommended alternative. Once the decision to implement the levee raise has been made, the necessary construction funds would be requested through the normal Corps budgeting process. Typically, it takes about two years for funding to be made available for design and construction. The funding request would be submitted in 2006 and construction would most likely start, at the earliest, in the late fall of 2008. The Corps will coordinate with the City of Lewiston and other local and regional governments and authorities with respect to the proposed levee raise to ensure local concerns are considered fully.

First Name:	**Last Name:**
Lynn	Moss
Phone:	**Email:**
208-746-2313	parksrrec@cl.lewiston.id.us
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Lewiston	ID 83501
Created On:	**Form Type:**
12/18/01 10:28:18 AM	E-Mail
Status Of Order:	

Ordered Items

Entire Report on CD: ☐

Paper copy of Main Report ONLY: ☐

Appendices

A ☐	E ☐	I ☐	M ☐
B ☐	F ☐	J ☐	N ☐
C ☐	G ☐	K ☐	
D ☐	H ☐	L ☐	

DMMP Comment

1 I would like to thank the corps and its staff for making the presentation in Lewiston last week on the Draft Dredged Material management Plan. My concerns relate to the timing as it relates to the Lewis Clark Bicentennial and other area recreational and tourist events. I got the impression that construction on the elevated police and pathway would not commence prior to the Event years. I hope that is the case. There are also a number of area events, especially running related, like the Seaport River Run that occur each year. I trust the Corps will be working with us to time construction to provide minimal impact if possible.

Thanks, Lynn Moss, Parks and Recreation Director, City of Lewiston

PS It was great to visit with Dave Daniel for a few minutes, hadnt seen him for years.

O-49

Organization
City of Lewiston, Parks and Recreation Director
Comment 1
My concerns relate to the timing as it relates to the Lewis Clark Bicentennial and other area recreational and tourist events. I got the impression that construction on the elevated dike and pathway would not commence prior to the Event years. I hope that is the case. There are also a number of area events, especially running related, like the Seaport River Run, that occur each year. I trust the Corps will be working with us to time construction to provide minimal impact if possible.
Response
The Corps' economic analysis of the levee modification indicates that the greatest benefits would be realized if the levee raise were constructed as soon as is practicable. However, the Corps expects to make a final determination about implementing the recommended levee raise after the results of the 2005 system biological checkpoint have been evaluated. If structural modifications to the lower Snake River dams have been successful in contributing to an improved adult return rate, and the intervening sediment accumulation has continued current trends, the Corps would make a decision to implement the levee raise alternative feature of the recommended alternative. Once the decision to implement the levee raise has been made, the necessary construction funds would be requested through the normal Corps budgeting process. Typically, it takes about two years for funding to be made available for design and construction. The funding request would be submitted in 2006 and construction would most likely start, at the earliest, in the late fall of 2008. The Corps will coordinate with the City of Lewiston and other local and regional governments and authorities with respect to the proposed levee raise to ensure local concerns are considered fully.

O-50

Port of Lewiston

1626 6th Avenue N. • Lewiston, ID 83501
(208) 743-5531 • Fax (208) 743-4243
E-mail: portinfo@lewiston.com

January 4, 2002

Dept. of the Army
Walla Walla District, COE
ATTN: Dredge Material Management Plan
201 North Third Ave.
Walla Walla, WA 99362-1876

Dear Lt. Col. Wagenaar:

After attending the Dredge Material Management Plan and Environmental Impact Statement meeting in Lewiston on December 13, 2001, we have the following comments:

1. The reference map, "Plate 17," shows the limits of navigational dredging ending at approximately river mile 1.6 on the Clearwater River. We believe this area was depicted because it was the limit of navigational dredging on the last dredging project. The congressionally authorized navigation limit is river mile 2.0 on the Clearwater River (the Memorial Bridge over the Clearwater River).

   Because this is a 20-year Dredge Management Plan, we believe that the plan should clearly represent the actual limits of navigational dredging. Currently, there is no need to dredge the navigational channel east of the area shown on Plate 17. However, 10 years from now we may need this area dredged to extend navigation. We do not want to run into problems down the road because the Dredge Management Plan did not reflect the authorized limits of navigational dredging.

2. Alternative 4, the preferred alternative, calls for raising a portion of the Lewiston Levee by three feet. We are strongly opposed to raising the Lewiston levee system. We believe that raising the levee would cause additional sedimentation and over-time require additional dredging for recreational sites and port berthing areas. Raising the levee three feet may reduce short-term dredging expenditures by the COE, but would definitely increase the long-term dredging expenditures by the Cities and Ports of Lewiston and Clarkston. Raising the levee only further cuts Lewiston off from access to the river. Allowing additional sediment to build-up will be detrimental to the community's ability to develop future water front facilities. The DMMP/EIS should provide a through analysis of navigation, recreation, and economic impacts to Lewiston and Clarkston of raising the levee before a preferred alternative is identified.

3. Levee construction is scheduled to start after 2005. While we oppose this alternative, we would point out that should any construction take place, it should be postponed (providing there are no safety issues) until after 2006. This will ensure that the any construction is not in conflict with the Lewis-Clark Bi-centennial.

Thank you for the opportunity to comment on the DMMP/EIS. We would be happy to provide any additional information regarding our comments if required.

Sincerely,
PORT OF LEWISTON

David R. Doeringsfeld
Manager

O-51

Organization
Port of Lewiston, Manager
Comment 1
The reference map, "Plate 17," shows the limits of navigational dredging ending at approximately river mile 1.6 on the Clearwater River. We believe this area was depicted because it was the limit of navigational dredging on the last dredging project. The Congressionally authorized navigation limit is river mile 2.0 on the Clearwater River (the Memorial Bridge over the Clearwater River). Because this is a 20-year Dredge Management Plan, we believe that the plan should clearly represent the actual limits of navigational dredging.
Response
The map (Plate 17) has been revised to show the proposed dredging area extending up to Clearwater River Mile 2.

Organization
Port of Lewiston, Manager
Comment 2
We are strongly opposed to raising the Lewiston levee system. We believe that raising the levee would cause additional sedimentation and over-time require additional dredging for recreational sites and port berthing areas.
Response
The proposed levee raise would provide protection for Lewiston / Clarkston from major flood events as a result of ongoing sedimentation. The proposed levee raise would not affect the current pool elevation or sedimentation rates. Future dredging would be required to maintain sites outside of the Federal navigation channel due to ongoing sedimentation with or without the levee raise. See response Idaho Department of Environmental Quality comment 6 regarding the need for levee raises in the future. The Corps will coordinate with the ports on the lower Snake River and McNary Reservoir to address concerns regarding dredged material management, sedimentation, and flow conveyance. This dialogue will include the Local Sediment Management Group.

Organization
Port of Lewiston, Manager
Comment 3
The DMMP/EIS should provide a thorough analysis of navigation, recreation, and economic impacts to Lewiston and Clarkston of raising the levee before a preferred alternative is identified.
Response
The Corps believes its analyses of issues relating to navigation, recreation, and economic impacts (as well as other environmental and socio-economic issues, are thorough and sufficient to use in the selection of a preferred alternative. Regarding navigation, there would be no effects from adopting the preferred alternative, compared to not adopting the alternative. Effects of all alternatives, as well as public input, were evaluated thoroughly during the process of selecting a preferred alternative. There would be no interruption of navigation for dredging or levee raise construction.

There would be an on-going need to dredged recreation and port facilities on a periodic basis regardless of the proposed levee raise.

Recreational and economic effects were analyzed in sections 1,3, and 4, and Appendix C of the DMMP/EIS. Although recreation along the walking paths would be interrupted temporarily, other nearby recreation facilities (walking paths, etc.) and the temporary nature of the anticipated impacts would not significantly disrupt recreation in the Lewiston/Clarkston area. The regional economic impacts of the construction activity are expected to be positive, as the proposed construction would result in increased regional jobs and procurements of equipment and materials.

Organization
Port of Lewiston, Manager
Comment 4
Should any construction take place, it should be postponed (providing there are no safety issues) until after 2006. This will ensure that the construction is not in conflict with the Lewis-Clark Bicentennial.
Response
See response to City of Lewiston's comment 3 and response to City of Lewiston Parks and Recreation Comment 1.

DEPARTMENT of NATURAL RESOURCES
Cultural Resources Program

CONFEDERATED TRIBES
of the
Umatilla Indian Reservation
P.O. Box 638
PENDLETON, OREGON 97801
Area code 503 Phone 276-3629 FAX 276-0840

January 7, 2002

Jack Sands, Project Manager
U.S. Army Corps of Engineers
Walla Walla District
201 North Third Avenue
Walla Walla, Washington 99362-1876

Dear Mr. Sands:

This letter constitutes the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Cultural Resources Protection Program (CRPP) comments on the draft Dredged Materials Management Plan and Environmental Impact Statement (DMMP/EIS). We would like to begin by referring you to two previous letters submitted by the CRPP regarding this subject, one dated November 13, 2000 to Sandy Simmons and one dated December 18, 2000 to Mary Keith.

We appreciate that the Corps decided to prepare an Environmental Impact Statement rather than an Environmental Assessment for this project. However, we still have some concerns in the document. The DMMP/EIS notes that tribes have been invited to participate in the Local Sediment Management Group (LSMG), however it refers to the tribes as merely interested parties,

> Additionally, other local entities with an interest in management of the resources involved in dredging and disposal activities (Indian tribes, ports, counties, municipalities, environmental groups, and transportation and industrial interests) would be asked to participate on an as-needed basis. DEIS § 1.8

1 The tribes are not simply interested parties, we have rights, secured by treaty to resources impacted by Corps operations. We would like it clarified that Native American Tribes are not mere stakeholders in this project. The Corps has a trust responsibility toward Tribes and therefore cannot simply group them in with everyone else. It is important that the EIS be specific as to how they intend to meet this responsibility. Currently the only reference to the trust responsibility is,

> Tribes would like their interests and rights considered within the context of certain tribal cultural values and perspectives not universally represented in Federal decision-making. The Federal government's trust responsibilities to tribes are meant to occur through ongoing meaningful Federal agency consultation with tribal governments. The context for tribal interest must be examined both from the perspective of Federal legal responsibilities as well as those points raised by tribal government representatives. Protection of treaty rights and resources and cultural resources are of interest to both tribes and the Corps. DEIS § 3.14.3

02 This paragraph indicates that the trust responsibility is met through consultation. This is not the case. The trust responsibility requires the Corps to clearly and deliberately consider the impact of Corps actions on treaty reserved and statutorily protected resources of the tribe, whether they are fish and wildlife resources or cultural resources. When there is a conflict between statutory authorities and treaty rights, the Corps is required to protect the treaty resources because the Corps does not have the authority to directly or indirectly abrogate a treaty right. The trust responsibility, in essence, requires the Corps to protect those treaty reserved resources, not to ignore them in light of other legal responsibilities. The DEIS has a great deal of material on the guidance in implementing the trust responsibility but it has only this one substantive reference to it.

03 The DMMP/EIS explains the Local Sediment Management Group's (LSMG) purpose well. However, one of its objectives is to "consider necessary cultural resource protection." We feel that this is inappropriate. Considering cultural resources involves knowing the location and nature of cultural resource sites. This information is sensitive and should not be shared with non-cultural resource personnel. Page ES-17 of the draft DMMP/EIS states,

> The development, implementation, and monitoring of project actions would be conducted in conformance with the NHPA [National Historic Preservation Act] and the National Environmental Policy Act. Prior to finalization and implementation of any plan, the Corps would complete the required cultural resource consultation. The Corps would continue to consult with appropriate State and Tribal Historic Preservation Officer(s) as well as other affected consulting parties throughout the life of the 20-year plan.

04 We would like clarification on this matter. Prior to each individual dredging event, will the Corps engage in consultation with the CTUIR regarding cultural resources? What form will this consultation take? Will the CRPP have the opportunity to comment on each dredging event? If this is not the case, then the CRPP objects to the proposed dredging/disposal areas indicated on plates 2 through 6 and 8 through 11 because of their vicinity to known cultural resource sites.

05 As for comments specific to cultural resources, we were disappointed to learn that the Corps does not plan to include a Cultural Resource Appendix to the EIS. Rather, a few paragraphs are all that will be dedicated to this resource. We believe that the appendix Mary Keith prepared had a great deal of information that needs to be included somewhere in the EIS. She discussed the consultation process, gave an overview of the use of the project area over time, discussed how the alternatives could affect cultural resource sites. She also differentiated between the types of effects one might encounter in different zones of the reservoir as well as management issues, and a process to address effects to resources. There must be a cultural resources appendix addressing these issues because all of them are completely ignored in the DMMP/EIS. Additionally, the

O-53

06 matters we identified in our comments on this appendix (the December 18, 2000 letter referred to above) have not been addressed.

On page ES-16 of the DMMP-EIS, it states, "Dredging actions for all four alternatives would be limited to the removal of accumulated sediments and would not affect original riverbed or shoreline material, or cultural resources contained within that material." Is this true for boat
07 ramps, HMUs and similarly situated areas? Are there any guarantees that removal won't effect cultural resources in the reservoirs? Later on the same page it states, "known submerged cultural resource sites would be avoided to the maximum extent practicable during the placement of
08 dredged material." We think we need specifics on what exactly "maximum extent practicable"
09 means. We are disappointed that unidentified submerged cultural resources are not addressed at all.

Finally, to reiterate some of what we have said in our previous letters, the CRPP would like the
10 Corps to outline its policy on inadvertent discoveries of ancestral remains and to develop a contingency plan if an archaeological site is disturbed during dredging activities. As the Corps well knows, inadvertent discoveries are a way of life along the Columbia and Snake rivers. A contingency plan is critical to consistent implementation of the NHPA as well as the Archaeological Resources Protection Act and the Native American Graves Protection and Repatriation Act.

We look forward to seeing our comments addressed in the final DMMP/EIS. If you have any questions, please feel free to contact me or Catherine Dickson, archaeologist, at (541) 276-3629.

Respectfully,

Jeff V[illegible]Pelt
Program Manager

JVP/cad

cc: Carl Merkle, Salmon Recovery Policy Analyst
Audie Huber, Intergovernmental Affairs Manager
Michael Farrow, Department of Natural Resources Director

O-54

Confederated Tribes of the
Umatilla Indian Reservation

P.O. Box 638 * 73239 Confederated Way
Pendleton, OR 97801
(541) 276- 3165 * (866) 909-8027 *(541)-276-3095 (F)

FAX

To Attn Dredged Material Mgmt Plan From Jeff Van Pelt, CRPP
Fax 509-527-7832 Pages 4 0
Phone Date 1/7/02
Re: CC:

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

C:\My Documents\Normal\Fax Cover.doc

DEPARTMENT of NATURAL RESOURCES

Cultural Resources Protection Program

CONFEDERATED TRIBES
of the
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P.O. Box 638
PENDLETON, OREGON 97801
Phone (541) 276-3629 FAX (541) 276-1968 FAX (541) 276-0540

November 13, 2000

Walla Walla District
Corps of Engineers
Environmental Compliance Section
ATTN: Sandy Simmons
201 North Third Avenue
Walla Walla, Washington 99362-1876

Subject: Public Service Notice Number CENWW-PM-PD-E 00-02

Dear Ms. Simmons:

Thank you very much for providing the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Department of Natural Resources Cultural Resources Protection Program (CRPP) with an opportunity to comment on the Environmental Assessment (EA) for the Interim Lower Snake, Clearwater, and Mid-Columbia River Dredging project. We have a number of concerns.

O-55

11 Please note that the Public Notice and the CRPP's reply to the notice constitute cultural resource consultation with the CTUIR on a technical level. It does not replace government-to-government consultation necessary before dredging deposal activities can proceed.

Our concerns are specific only to the lands ceded by the CTUIR to the US government in the Treaty of 1855. Additionally, these comments are limited to cultural resources. The CTUIR will submit comments regarding other concerns separately. We have no concerns with Alternative A, No Action. Our concerns
12 with Alternative B are that in-stream disposal of dredge materials may harm cultural resources (this will be discussed in depth below). Alternative C involves disposal of dredge materials in the Joso Habitat
13 Management Unit. This alternative is not acceptable because there are a number of cultural resource sites in this disposal area. The CRPP's concerns regarding Alternative D, In-water Disposal or Other
See 12 Beneficial Use, are similar to those regarding Alternative B. Alternative D is the Corps' preferred alternative and is discussed at length.

Because of confusion about exactly which areas were to be dredged in 2000 to 2001, we examined Mary Keith's September 18, 2000 "Cultural Resource Inventory Report FY 2000-2001 Interim Dredging." This report indicates dredging within the CTUIR's ceded lands will be just below the Lower Monumental Dam [redacted] The EA does not include the Hollebeke dredging in the 2000-2001 dredging plans discussed on pages 9-11, but it does list it in Table 2, Sites to be Dredged, on page 5. The CTUIR is concerned about
14 this area [redacted]

See 13 [redacted] Unless these sites have been found ineligible for inclusion in the National Register of Historic Places, placing dredge spoils upon them would be an adverse effect.

15 The CRPP is concerned with the EA's system for assessing the impacts of future dredging. We wonder who is on the Regional Dredging Team. Why is work to be coordinated with this group not subject to an EA or an environmental impact statement? The future dredging provisions include preparation of a cultural resources evaluation for each dredging event, but the EA does not specify who will conduct this evaluation and that it will be done in consultation with affected tribes. Without such consultation this evaluation will not satisfy the National Historic Preservation Act.

The Cultural Resources sub-section of Affected Environment and Environmental Consequences makes several statements and draws conclusions with which the CRPP does not agree. On page 48 the EA says, "Burial of archaeological sites for their protection is a viable alternative to scientific excavation." Presumably, the intended meaning is that burial is a mitigation alternative comparable to excavation. The EA goes on to state, "However, the complex reaction between site soils and cultural materials require [sic] that the design and construction of a protective resource covering needs to be favorable to the preservation of subsurface cultural deposits. The objective is not to stop the deterioration rate of cultural materials, but rather to not contribute further to their loss. In order to determine if in-water disposal actions would adversely affect a cultural property, the nature of cultural deposits and project affects must be assessed."

16 First, the CTUIR does not agree that burial of sites "for their protection" is automatically an acceptable way to mitigate adverse effects. In fact, traditional Native American burial customs in the Middle Columbia and Lower Snake River regions involved interring people where they passed over. This resulted in large cemeteries being created over time on many of the islands in the rivers. However, it also means that burials can be encountered anywhere within the tribes' traditional areas. Traditional beliefs indicate that a person should be buried no more than 18 to 24 inches below the surface of the ground. The CTUIR is very much opposed to any action that would add to the depth of the burials.

See 16 Second, taken together, all of these statements in the EA indicate that placing dredge spoils on sites can be an adverse effect. In the early 1980s the Corps of Engineers (Corps) worked with other agencies to prepare Lenihan et al.'s National Reservoir Inundation Study which discussed the impacts reservoirs have on cultural resources. Lenihan et al. noted that the common wisdom was that burying a site should "enhance rather that detract from long-term site preservation" (p.102). They went on, however, to say that the benefit may be "more imaginary than real...The stresses involved in such burial may, over the long term, have adverse effects on the resource base."

Third, it is our understanding that it is *exactly* the Corps' responsibility to "stop the deterioration rate of cultural materials" when their project is causing the adverse effect.

Fourth, the EA makes no provision for assessing the "nature of cultural deposits and project effects." In fact, the EA makes a "no historic properties affected" determination based in part on the location of areas to be dredged and spoils location in areas free of cultural resources (based on available data). The CTUIR would like to point out that the available data consist primarily of pre-reservoir studies done in the 1940s and 1950s. These studies focused on investigating large and/or spectacular sites. Many smaller prehistoric sites and almost all historic sites were not recorded. Subsequent surveys have located many cultural resources not identified in the early surveys. Therefore, the CRPP believes it is inappropriate to assume that all of the dredge disposal sites and the areas to be dredged are free of cultural resources based

solely on the pre-reservoir studies. As an example, site 10-33-04/01 was recorded in 1999. It is a prehistoric artifact scatter with fire-cracked rock, cobble tools, a net weight, and flakes. Artifacts were lagged out along the beach, suggesting that part of the site may be inundated. This site is very near the dredging to be done for the Hollebeke Habitat Management Unit. It is reasonable to believe that the dredging could adversely effect the site by dredging through it or provoking sub-surface erosion as the newly dug trench achieves an appropriate angle of repose.

In summary, our greatest concern with the in-stream disposal of the dredged materials is that we have no assurances that, indeed, there are no cultural resource sites in the areas to be utilized. If the Corps selected upland disposal, selected areas could be cleared. This would be done first by above-ground cultural resource inventories and then by the excavation of a number of shovel test probes to determine whether below-ground cultural resources are present. These kinds of determinations are also possible for inundated areas. The Corps may want to consider an underwater archaeology program or a drawdown to properly inventory and assess the cultural resources in the areas to be impacted by dredging activities. The CTUIR does not accept the idea that the fact that inundated cultural resources are difficult to access makes them ineligible for inclusion in the National Register.

17 In order to adequately assess this project's effects to cultural resources, we believe an environmental impact statement is necessary. As written, the EA is difficult to follow because it is unclear what is happening in 2000 and 2001 and what is happening between 2001 and 2003. Many of the areas identified on the plates as disposal areas and some of the areas to be dredged will impact cultural resources sites. Because the 2001 to 2003 dredge events are only partially covered under this EA, it is not clear to what extent they should be commented upon. We are uncomfortable with the idea that these comments will be our only opportunity for technical cultural resource consultation for three years' worth of dredging.

O-56

The CRPP strongly disagrees with the Finding of No Significant Impact and the finding of no historic properties affected. We believe that this EA and its provisions for future dredging preclude understanding the cumulative effects of this multi-year project. We believe that both the 2000 to 20003 dredging itself and the proposed in-stream disposal of dredge materials have the potential to adversely affect both known and unknown cultural resources.

Thank you very much for your time and kind attention. If you have any questions, please call me or Jeff Van Pelt, Program Manager, at (541) 276-3629.

Sincerely,

Catherine E. Dickson

for Manfred E. W. Jaehnig, Ph.D.
Principal Investigator and
Tribal Historic Preservation Officer

ced/MEWJ

cc: Jeff Van Pelt, CRPP Manager
Carl Merkle, Salmon Recovery Policy Analyst
Audie Huber, Intergovernmental Affairs Manager
Michael Farrow, Department of Natural Resources Director

DEPARTMENT of NATURAL RESOURCES

Cultural Resources Protection Program

CONFEDERATED TRIBES
of the
Umatilla Indian Reservation
P.O. Box 638
PENDLETON, OREGON 97801
Phone (541) 276-3629 FAX (541) 276-1966 FAX (541) 276-0540

December 18, 2000

Mary Kaith
Department of the Army
Walla Walla District, Corps of Engineers
201 North Third Avenue
Walla Walla, Washington 99362-1876

Dear Mary:

Thank you for the opportunity to comment on the draft cultural resources appendix for the draft environmental impact statement (EIS) for the Dredge Material Management Plan for the McNary and Lower Snake River Reservoirs. We apologize for the delay in submitting these comments.

I would like to begin by noting that we found it difficult to comment on this document without having the entire draft EIS. We do not have items referred to in this document including other appendices and the main text of the draft EIS. We are unable to place the cultural resources portion of the proposed alternatives into a larger context. Without maps showing specifically where the dredging is proposed and the area of potential effect, we cannot evaluate the number of sites identified for each proposed dredging area. Finally, we fear that our comments on this document could preclude us from commenting on the draft EIS as a whole. We will have more thorough comments perhaps covering other issues when we receive the entire draft EIS.

18 Our preferred alternative is not one of the choices. We would like one of the alternatives to be no dredging at all. Our second choice is Alternative 3, upland disposal of dredged materials. It is only
See 13 through this alternative that we can determine the eligibility of sites that will be impacted by the disposal of dredge materials. In the discussion of how to address cultural resources concerns for this alternative, you need to mention traditional cultural properties—how will they be identified and if there are any, how will the adverse effects to them be mitigated?

See 12 We feel that in stream disposal is unacceptable because of the potential adverse effects to known and unknown cultural resources. Burials can be encountered anywhere within the tribes' traditional areas. Traditional beliefs indicate that a person should be buried no more than 18 to 24 inches below the surface of the ground. The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) is very much opposed to any action that would add to the depth of the burials.

See 10 We have a number of concerns with this document as it now stands. What is the Corps' policy on inadvertent discoveries of ancestral remains? Under the Native American Graves Protection and Repatriation Act the Corps must cease activities for 30 days to notify Native American tribes. Prior to

any dredging activities, we want an agreement in place between the CTUIR and the Corps on how inadvertent discoveries will be handled. Also, is there a contingency plan if an archaeological site is disturbed during dredging? The CTUIR requests that a tribal cultural resource monitor be present during dredging activities.

19 The second Table 1, which begins on page 12, lists a number of dredging areas that have no recorded dredging history. We believe that these areas must be treated differently than those which have been dredged before; this difference is reflected in the excerpt of 33 CFR 336 provided in Attachment A. We see no such difference reflected in the text.

20 We are curious how the Corps plans to determine which inundated sites are eligible/potentially eligible for inclusion in the NATIONAL REGISTER OF HISTORIC PLACES. Then, how will you mitigate adverse effects to inundated eligible sites? Perhaps these subjects will be included in the cultural resources plan mentioned on page 32. Will that plan be part of the final draft EIS? If not, when will it be available for comment?

21 We feel that tables similar to Table 7 need to be developed for all of the other reservoirs. How specifically will the Corps assess the potential for contaminants in dredge materials to alter culture-bearing soil? We would like to see specific citations for many of the claims made in the sections 3.2.1, 3.2.2, 3.3.3, and 3.2.4. Will the drawings of the irregularly shaped areas to be dredged be included in the draft of the EIS? They would be helpful.

22 On page 23 in a discussion of Mathewson et al. you make the statement, "The objective is not to stop the deterioration rate of cultural materials, but rather to not contribute further to their loss." Since this statement is not true of the Corps' responsibility, which is in fact to stop the deterioration rate of cultural resources if they are being adversely effected by a Corps undertaking, it seems you are speaking of Mathewson et al.'s objective. We suggest that you omit this sentence.

It is important to note that the CTUIR sees a difference between stabilizing sites that are actively being adversely effected by an action such as erosion and placing fill over a site that as far as anyone knows is fairly static.

23 Finally, we advise you to carefully proofread the appendix. There are a number of grammatical errors, apparently missing bits of text, and numbering problems in both the text and the tables. We are missing pages 41 and 42. There are conflicts between dates and names cited in the text and the citations in the bibliography.

We applaud the appendix's emphasis on tribal consultation. We appreciate the Corps' efforts to begin that process early. We hope these comments are helpful. We recommend that in the future the Corps be more specific about when it needs comments and why documents are being delivered one section at a time. If you have any questions, please feel free to contact me or Catherine Dickson at (541) 276-3629.

Respectfully,

Jeff Van Pelt, Program Manager

JVP/ced

cc: Michael Farrow, Department of Natural Resources Director
Audie Huber, Intergovernmental Affairs Manager
Jack D. Sands, Environmental Study Manager

O-57

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 1
The Tribes are not simply interested parties, we have rights, secured by treaty to resources impacted by Corps operations. We would like it clarified that Native American Tribes are not mere stakeholders in this project. The Corps has a trust responsibility toward Tribes and therefore cannot simply group them in with everyone else. It is important that the EIS be specific as to how they intend to meet this responsibility.
Response
The Corps' relationship to the Tribes is discussed in Sections 3.14 and 6.4. The effects of the alternatives on Native American Tribes and communities are discussed in Section 4.15.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 2
This paragraph indicated that the trust responsibility is met through consultation. This is not the case. The trust responsibility requires the Corps to clearlyand deliberately consider the impact of Corps actions on treaty reserved and statutorily protected resources of the tribe, whether they are fish and wildlife resources or cultural resources.
Response
The paragraph referenced in the comment has been revised. The Corps has considered the potential impact to the fish, wildlife, and cultural resources in your reference for each of the alternatives evaluated.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 3
The DMMP/EIS explains the LSMG's purpose well. However, one of its objectives is to "consider necessary cultural resource protection." We feel that this is inappropriate. Considering cultural resources involves knowing the location and nature of cultural resource sites. This information is sensitive and should not be shared with non-cultural resource personnel.
Response
The sensitivity of both cultural resource site information and location is integrated into the Corps' procedures. The location of cultural resource sites will not be given to the general public. The appropriate precautions will be taken to ensure sensitive cultural resources information is protected. Because the Tribes in the region are participants in the LSMG, the Corps is assuming the Tribes will assist in developing protocols for what information can be shared and with whom on an as-needed basis. Likewise, the nature and extent of cultural resource site information that is released will be limited to only the minimum necessary and appropriate for each specific situation.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 4
We would like clarification on this matter (Page ES-17 of the draft DMMP). Prior to each individual dredging event, will the Corps engage in consultation with the CTUIR regarding cultural resources?
Response
Government–to-government consultation between the Corps and the CTUIR on the DMMP undertaking has been initiated. To meet its compliance requirements under Section 106 of the National Historic Preservation Act, the Corps will continue to coordinate with the CTUIR and other interested parties concerning it proposed dredging and cultural resources issues. The Corps will consult with the CTUIR and other tribes for each dredging and disposal activity.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 5
We believe that the appendix Mary Keith prepared had a great deal of information that needs to be included somewhere in the EIS. There must be a cultural resources appendix addressing these issues because all of them are completely ignored in he DMMP/EIS.
Response
The cultural resources appendix the CTUIR received was a draft. Upon reviewing the level of cultural resources information already contained in the main document, the decision was made to not to repeat it in an appendix. The Corps believes that the cultural resources information contained in the main document meets NEPA requirements and is a thorough evaluation. Further information can be found in the Lower Snake River Juvenile Salmon Feasibility Study and its Appendix Q (incorporated by reference).

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 6
Additionally, the matter we identified in our comments on this appendix (the December 18, 2000 letter referred to above) have not been addressed.
Response
The November 13, 2000 and the December 18, 2000 comments submitted by the CTUIR are included here for response.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 7
On page ES-16 of the DMMP/EIS, it states, "Dredging actions for all four alternatives would be limited to the removal of accumulated sediments and would not affect original riverbed or shoreline material, or cultural resources contained within that material." Is this true for boat ramps, HMUs and similarly situde areas? Are there any guarantees that removal won't affect cultural resources in the reservoirs?
Response
See response for Nez Perce Tribal Executive Council's comment 34.

Final DMMP/EIS
July 2002

U.S. Army Corps of Engineers
Walla Walla District

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 8
We think we need specifics on what exactly "maximum extent practicable" means.
Response
Based on the available cultural resources site location information, the Corps will set forth procedures and quality controls directed at preventing dredged material from being placed directly on known inundated historic properties and that there will be minimal impacts associated with sediment drift.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 9
We are disappointed that unidentified submerged cultural resources are not addressed at all.
Response
The Corps is not aware of any technology or methods presently available that would allow it to effectively address the matter of unidentified submerged cultural resources.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 10
The CRPP would like the Corps to outline its policy on inadvertent discoveries of ancestral remains and to develop a contingency plan if an archeological site is disturbed during dredging activities.
Response
If human remains are inadvertently discovered during dredging operations, all work in the immediate area will stop and will not resume until the matter has been satisfactorily resolved. The Corps' designated points of contact will be immediately notified of the discovery. The Corps will notify appropriate Indian Tribes, law enforcement, and coroner's offices. Every effort will be made to establish the cultural identity of the remains (Native American or not). If the remains are determined to be Native American, the Corps shall comply with the terms set forth in the Native American Graves Protection and Repatriation Act. The same process will be used if an archaeological site is inadvertently impacted.

It should also be noted that the dredging at the confluence has been done to a greater extent in years past and that other sites will have minimal dredging occurring.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 11
Please note that the Public Notice and the CRPP's reply to the notice constitute cultural resource consultation with the CTUIR on a technical level. It does not replace government-to-government consultation necessary before dredging deposal activities can proceed.
Response
See response to comment 4 above. The Corps will fulfill its responsibilities with respect to

government-to-government consultations. See Section 6.4.3 of the DMMP/EIS for detailed discussion of this process.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 12
Our concerns with alternative B, alternative D, Other Beneficial Uses, or in-stream disposal of dredge material are that they may harm cultural resources.
Response
See response to comment 8 above.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 13
Alternative C involves disposal of dredge materials in the JosoHabitat Management Unit. This alternative is not acceptable because there are a number of cultural resource sites in this disposal area.
Response
Prior to undertaking disposal of dredged materials in any upland area known to contain historic properties, cultural resources assessments will be done on the properties to determine their National Register eligibility and if they should be given additional consideration (e.g. protection, avoidance, etc.).

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 14
The CTUIR is concerned about [cultural resources in the project area].
Response
See response to comment 13 above.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 15
The CRPP is concerned with the EA's system for assessing the impacts of future dredging. We wonder who is on the Regional Dredging Team. Why is work to be coordinated with this group not subject to an EA or an environmental impact statement? The future dredging provisions include preparation of a cultural resources evaluation for each dredging event, but the EA does not specify who will conduct this evaluation and that it will be done in consultation with affected Tribes. Without such consultation this evaluation will not satisfy the National Historic Preservation Act.
Response
The membership of the Regional Dredging Team (now the Local Sediment Management Group) is listed in Section 1.8 of the DMMP/EIS. The DMMP/EIS is the NEPA document that addresses

work coordinated with the group.

As stated in Section 4.5, the Corps would consult with the SHPOs, Tribes, and other interested parties to identify potential impacts of the dredging and disposal activities on cultural properties. This consultation will follow the National Historic Preservation Act Section 106 process.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 16
First, the CTUIR does not agree that burial of sites "for their protection" is automatically an acceptable way to mitigate adverse effects.
Response
The Corps agrees that burial of cultural sites is not automatically an acceptable way to mitigate adverse effects. Studies done on site burial have shown both the advantages and disadvantages that can result from covering sites. The Corps will consider this option on a case-by-case basis and consult with the Tribes and other interested parties before making any decision on what action will be taken.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 17
In order to adequately assess this project's effects to cultural resources, we believe an environmental impact statement is necessary.
Response
The interim dredging was not implemented. This DMMP/EIS addresses dredging and dredged material disposal for the next 20 years. The effects of these activities on cultural resources have been considered. Each time the Corps proposes to dredge, it will evaluate the effects of the dredging and disposal activity on cultural resources. The Tribe will be given the opportunity to review and comment on each dredging activity.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 18
We would like one of the alternatives to be no dredging at all.
Response
A "no dredging" alternative would not meet the project purpose and need. None of the sediment reduction strategies were totally successful in stopping sediment from entering the river and depositing it where the material would interfere with navigation, recreation, and irrigation intakes. Some level of dredging would be required to maintain the navigation channel.

Regardless of the alternative selected, the Corps would avoid known cultural properties in the dredging and disposal areas.

Also see response to Save our Wild Salmon's comment 6.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 19
The second Table 1, which begins on page 12, lists a number of dredging areas that have no recorded dredging history. We believe that these areas must be treated differently that those which have been dredged before; this difference is reflected in the excerpt of 33 CFR 336 provided in Attachment A. We see no such difference reflected in the text.
Response
See response to the Nez Perce Tribal Executive Council comment 34.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 20
We are curious how the Corps plans to determine which inundated sites are eligible/potentially eligible for inclusion in the National Register of Historic Places. Then, how will you mitigate adverse effects to inundated eligible sites?
Response
The Corps will work from existing information available on inundated cultural resources sites with regard to determining National Register eligibility. As established under Section 106 of the National Historic Preservation Act, the Corps will coordinate/consult with appropriate State Historic Preservation Offices, Indian Tribes, the Advisory Council and other interested parties to consider possible mitigation actions for Register-eligible sites.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 21
We feel that tables similar to Table 7 need to be developed for all of the other reservoirs. How specifically will the Corps assess the potential for contaminants in dredge materials to alter culture-bearing soil? We would like to see specific citations for many of the claims made in the sections 3.2.1, 3.2.2, 3.3.3, and 3.2.4. Will the drawings of the irregularly shaped areas to be dredged be included in the draft of the EIS? They would be helpful.
Response
The Draft DMMP/EIS presented and the Final DMMP/EIS presents maps showing proposed dredging and in-water habitat creation/beneficial use areas within the lower Snake River and McNary Reservoirs. The Corps did not specifically analyze the potential for chemical constituents of dredged material to alter culture-bearing soil. However, given the existing information on sediment quality (see Section 3.9 of the DMMP/EIS), the Corps does not anticipate that proposed dredging or dredged material management would result in impacts to culture-bearing soil.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 22
On page 23 in a discussion of Mathewson et al. you make the statement, "The objective is not to stop the deterioration rate of cultural materials, but rather to not contribute further to their loss." Since this statement is not true of the Corps' responsibility, which is in fact to stop the deterioration rate of cultural resources if they are being adversely affected by a Corps undertaking, it seems you are speaking of Mathewson et al.'s objective. We suggest that you omit this sentence. It is important to note that the CTUIR sees a difference between stabilizing sites that are actively being adversely affected by an action such as erosion and placing fill over a site that as far as anyone knows is fairly static.
Response
This comment is specific to information contained only in the draft cultural resources appendix for the 1999 Interim Dredging Draft Environmental Assessment. Because this information is not in the DMMP/EIS document, it will not be addressed.

Organization
Confederated Tribes of the Umatilla Indian Reservation, Cultural Resources Program Manager
Comment 23
Finally we advise you to carefully proofread the appendix. There are a number of grammatical errors, apparently missing bits of text, and numbering problems in both the text and the tables. We are missing pages 41 and 42. There are conflicts between dates and names cited in the text and the citations in the bibliography.
Response
Your comment is noted.

Confederated Tribes and Bands
of the Yakama Indian Nation

Established by the
Treaty of June 9, 1855

January 18, 2002

Department of Army
Walla Walla District, Corps of Engineers
ATTN: Dredged Material Management Plan
201 North 3rd Avenue
Walla Walla, WA 99362-1876

RE: Walla Walla District Draft Dredged Material Management Plan and EIS

Dear Mr. Sands:

The Yakama Nation (YN) submits these comments regarding the draft Dredged Material Management Plan and Environmental Impact Statement (DEIS) released by your office. These comments are the final version of comments submitted to your office January 7. We incorporate the comments submitted by the Columbia River Inter-Tribal Fisheries Commission by reference.

O-62

1 The YN has a variety of concerns with the DEIS as released by your office. The greatest concern we have revolves around in-water disposal. It appears that there is inadequate information and analysis conducted to reach the conclusion that in-water disposal will benefit fish and other biological organisms. There is a strong possibility that the preferred alternative will cause serious harm to listed species and trust resources.

While we support the Corps' intent to benefit the natural environment, the preferred alternative, which would create shallow water habitat, is not supported by sound science. While the referenced study may have shown a correlation between existing shallow water habitat and salmonid use, it appears that the Corps is overreaching in utilizing this as a basis for in-water disposal in the DEIS.

2 The Corps should also provide additional analysis of dredged material for contamination irrespective of the disposal option selected. There is evidence of sediment contamination created by the Hanford Project and elevated levels of mercury above Grand Coulee Dam. Dredging and redeposition of contaminated sediments will impact trust resources and ESA listed species including fish and terrestrial species.

3 The DEIS acknowledges that an alternative to dredging exists in controlling upland erosion. While the DEIS states this fact, there is no alternative including this as an

Post Office Box 151, Fort Road, Toppenish, WA 98948 (509) 865-5121

3 cont. option. The Council on Environmental Quality has explicitly stated in the *Forty Most Asked Questions* that agencies should include reasonable alternatives even though such alternatives may be outside the existing authority of the action agency.

The control of upland sediment sources is a reasonable alternative to include given the long-term nature of the dredge program contemplated in the DEIS. It is entirely conceivable that this alternative type approach could be implemented, but only if the action agency takes a first step towards considering it.

4 We remind you that the U.S. Army Corp of Engineers has a trust responsibility to the Yakama Nation. Irrespective of how the Corps may interpret its duty towards the YN, any damage to trust resources through such activities as dredging, damage that implicitly impacts the membership of the YN, is contrary to this trust placed upon the Federal government and its agents.

Please feel free to contact Mr. Paul Ward, Environmental Manager, YN Fisheries Resource Management Program at (509) 865 6262 with any questions regarding these comments.

Sincerely,

Harry Smiskin, Administrator
Water/Fish/Wildlife/TFW
Department of Natural Resources
Yakama Nation

Organization
Confederated Tribes and Bands of the Yakama Indian Nation, Department of Natural Resources
Comment 1
The Yakama Nation has a variety of concerns with the DEIS as released by your office. The greatest concern we have revolves around in-water disposal. It appears that there is inadequate information and analysis conducted to reach the conclusion that in-water disposal will benefit fish and other biological organisms. There is a strong possibility that the preferred alternative will cause serious harm to listed species and trust resources. While we support the Corps' intent to benefit the natural environment, the preferred alternative, which would create shallow water habitat, is not supported by sound science. While the referenced study may have shown a correlation between existing shallow water habitat and salmonid use, it appears that the Corps is overreaching in utilizing this as a basis for in-water disposal in the DEIS.
Response
Numerous scientists from federal, state, university and tribal agencies set up the study design in 1987. These agencies include the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, National Marine Fisheries Service, ESSA, Battelle-PNNL, Washington Department of Fisheries, Oregon Department of Fish and Wildlife, University of Idaho, University of Washington, Oregon State University, and the Yakima (now Yakama) Indian Nation. The researcher involved with many of the studies was David Bennett, Ph.D., a tenured professor at the University of Idaho. With a multiple year study design, a lead researcher independent from the federal government, and a study design from the regions leading experts, the Corps believes that the science is sound. (Web et al 1987)

Organization
Confederated Tribes and Bands of the Yakama Indian Nation, Department of Natural Resources
Comment 2
The Corps should also provide additional analysis of dredged material for contamination irrespective of the disposal option selected. There is evidence of sediment contamination created by the Hanford Project and elevated levels of mercury above Grand Coulee Dam. Dredging and redeposition of contaminated sediments will impact trust resources and ESA listed species including fish and terrestrial species.
Response
See response to the Columbia River Inter-Tribal Fish Commission's Comment 24.

Organization
Confederated Tribes and Bands of the Yakama Indian Nation, Department of Natural Resources
Comment 3
The DEIS acknowledges that an alternative to dredging exists in controlling upland erosion. While the DEIS states this fact, there is no alternative including this as an option. The Council on Environmental Quality has explicitly stated in the Forty Most Asked Questions that agencies should include reasonable alternatives even though such alternatives may be outside the existing authority of the action agency. The control of upland sediment sources is a reasonable alternative to include given the long-term nature of the dredge program contemplated in the DEIS. It is entirely conceivable that this alternative type approach could be implemented, but only if the action agency takes a first step towards considering it.
Response
Non-dredging and reduced dredging alternatives were considered in Sections 2.2.1-2.2.3 of the

DMMP/EIS. The text in these sections has been revised to include an expanded discussion of why these measures would not adequately address the sedimentation problem in the five reservoirs. Reducing sediment generated by land use practices was considered, but would not eliminate the need for dredging. Although the Corps has no authority to change land use practices on non-Corps property, the Corps will use the Local Sediment Management Group to pursue possible modifications to land use practices. Sediment reduction alone will not solve the sedimentation problem.

Also See response to Comment 2.

Organization
Confederated Tribes and Bands of the Yakama Indian Nation, Department of Natural Resources
Comment 4
We remind you that the USACE has a trust responsibility to the Yakama Nation.
Response
Comment noted.

COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION
729 NE Oregon, Suite 200, Portland, Oregon 97232
Telephone 503 238 0667
Fax 503 235 4228

January 18, 2002

Lt. Colonel Richard Wagenaar
Walla Walla District
Corps of Engineers
201 North Third Avenue
Walla Walla, WA 99362

L. John Iani
Regional Administrator
Environmental Protection Agency Region 10
1200 Sixth Avenue
Seattle, Washington 98101

RE: **Final Comments on the Walla Walla District, Corps of Engineers and Environmental Protection Agency's Draft Dredge Material Management Plan and Environmental Impact Statement (DMMP/EIS) Environmental Assessment for the Interim Lower Snake, Clearwater and Mid-Columbia Rivers Dredging**

Dear Lt. Colonel Wagenaar and Mr Iani:

The Columbia River Inter-Tribal Fish Commission (CRITFC), [1] on behalf of its member tribes, appreciates the opportunity to review and provide final comments to the Walla Walla District Draft Dredge Material Management Plan and Environmental Impact Statement (DEIS). We appreciate the extension of time until January 18, 2002 offered to CRITFC by the Corps to complete DEIS comments. The following comments supersede our preliminary DEIS

1 comments submitted to the Corps on January 7, 2002. Until the NEPA process is finalized an authentic "no-action" alternative, no dredging, must, by default, be implemented. We remind

2 the Corps and EPA, that, as departments of the government of the United States, they have a trust responsibility to protect and uphold treaty resources of the Columbia River Treaty tribes. In these comments, we also include by reference January 18, 2002 DEIS comments by the Nez Perce Tribe.

[1] CRITFC was created in 1977 by the Nez Perce Tribe, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon and the Yakama Nation. The governing body of CRITFC is composed of the fish and wildlife committees of its member tribes. Protection and enhancement of those streams and flows that provide spawning, rearing and migratory habitat for anadromous fish are of critical importance to the tribes. CRITFC provides technical and legal support to the tribes to carry out those goals.

O-64

General Comments

3 We concur with the January 18, 2002 comments of the Nez Perce Tribe regarding government-to-government consultations between the Corps and EPA and CRITFC's member tribes regarding proposed DEIS alternatives and potential actions. Consultation is the bilateral decision making process between sovereigns that leads up to and includes a decision. EPA and the Corps must engage our member tribes in formal consultation at the policy level before making a decision about a preferred alternative in the final EIS (FEIS) and the Record of Decision (ROD). This is consistent with EPA's July 16, 2001 Region 10 Tribal Consultation Framework and the Corps nationwide policy of consultation with Native American tribes.

Past Lower Snake River Dredging Comments

CRITFC submitted formal comments opposing Corps' dredging in the Lower Snake River on June 8, 1992 (Strong 1992a; Strong 1992b). Among other things, CRITFC recommended that the Corps, in cooperation with the USFWS and the Columbia Basin Fish and Wildlife Authority (CBFWA) survey the site and evaluate impacts to known fall chinook spawning areas. The Corps proceeded with this dredging even though ESA-listed Snake River fall chinook alevins were found in the dredging spoils.

In 1997, the Corps, using an environmental assessment, again proceeded with dredging 500,000 cubic yards of sediment in the Lower Snake River in spite of CRITFC's objections. In this case, the USFWS joined CRITFC in recommending that 1) in-water disposal of dredging spoils discounted the fact that the Lower Snake dams were under consideration of breaching, 2) upland disposal at the Port of Wilma and hydraulic dredging should have been considered instead of clamshell dredging and in-water disposal (Cambell 1997). CRITFC also recommended that the Corps pursue an environmental impact statement on the proposed dredging and in the meantime, recommended that the Corps implement the no-action alternative (Strong 1997). However, the Corps proceeded with the proposed action based upon a FONSI on an inadequate environmental assessment. Other key issues for CRITFC included 1) an inadequate comparison of the costs of alternatives, 2) inadequate assessment of the specific impacts of sediment disposal under the various alternatives, and 3) inadequate examination of tribal cultural issues.

On November 11, 2000 CRITFC commented on the Corps' Corps' Environmental Assessment and draft Finding of No Significant Impact (DFONSI) for the Interim Lower Snake, Clearwater and Mid-Columbia Rivers Dredging (EA). We strongly encouraged the Corps to complete an environmental impact statement prior to making a final decision on an alternative. We raised a series of issues regarding impacts to federal environmental standards, ESA listed salmon stocks and treaty fisheries that were previously raised in other comments.

DEIS Alternatives

We appreciate the effort the Corps and EPA have shown in constructing a draft environmental impact statement on potential dredging actions that could impact resources for many decades to come. With respect to the DEIS, CRITFC finds the Corps and EPA have raised

a similar series of facts regarding the impacts of treaty and cultural resources as in the 1992, 1997 and 2000 Lower Snake dredging environmental assessments. These include the following:

4 All four DEIS alternatives involve active dredging of the Lower Snake River and McNary Pool. We are unsure as to what the scoping for this DEIS entailed, however, other alternatives should have been considered for analysis and should be included in a Final EIS. One
5 of these are actions to limit sediment input into the Lower Snake River such as land conservation methods to reduce sediment influxes into the river.

6 Another alternative that should be included in a final EIS (FEIS) is the breaching of the four Lower Snake dams. The NMFS 2000 FCRPS Section 7 Biological Opinion provides performance standards and check in periods with the ultimate possibility of recommending that the Lower Snake dams are breached. Given the historical low survival of Snake River juvenile salmon and steelhead in 2001, it is likely that survival performance standards will not be met and the dams may be breached. Further, CRITFC views that alternatives 2,3 and 4 would involve irretrievable commitment of federal funds to structures and activities that could, from a cost perspective, prejudice dam breaching alternatives in the future. Thus, this alternative should be fully analyzed in the FEIS.

O-65

Section 2.2.2 of the DEIS contemplates reservoir drawdown to accommodate floods, and offers an analysis claiming that under an operation of msl 733, the confluence of the Snake and Clearwater Rivers would cause Lower Granite pool elevations in a heavy flood event to rise about msl 738. But the DEIS does not offer a flood event analysis if the pool were drawn down below msl 733 during the event. The temporary drawdown of Lower Granite pool to msl 710 (spillway crest) in 1992 demonstrated that this operation can be accomplished without impacting turbine operation and even adult salmon passage since a low level fishway outlet was available on the upstream side of the dam. Thus, we believe the Corps and EPA should include an
7 analysis and alternative of temporarily drawing down of Lower Granite pool to msl 710 in the FEIS. We believe that this operation under flood flows would also serve to move large amounts of sediments in the confluence area through the pool and downstream, thus, facilitating navigation in the long run.

8 The DEIS lacks an authentic, "no action" alternative, where no dredging would occur and other actions would take place to insure navigation is maintained. Vessels with lighter loads could still navigate the Lower Snake River without maintaining the navigation channel at a
9 specific depth. We understand that the Corps is authorized by Congress to provide navigation but we don't believe this means maintaining an explicit 14 foot depth.

Socioeconomic and Cultural Resource Impacts

With respect to socioeconomic impacts from DEIS alternatives, Section 3.14.3 of the DEIS mentions the Meyer Resources (1999) analysis which describes the transfer of river wealth from tribal communities to non-tribal communities from Corps actions such a building and operating the Lower Snake dams and associated activities such as dredging for navigation.
10 However, Appendix C, Economic Analysis in the DEIS fails to describe, and much less analyze, the continuing and cumulative impacts of the four alternatives in the DEIS on tribal communities

using methods and data described in Meyer Resources (1999). This is a significant failing in the DEIS because the socioeconomic impacts of the four alternatives are not defined in relationship to economic impacts to tribal communities. This deficiency must be resolved by including such an analysis in the FEIS and analyzing the authentic, "no action" alternative against the standards and methods described in Meyer Resources (1999) and CH2 M Hill (1999). The DEIS fails to note that the proposed dredging will continue to impact treaty and cultural resources. Loss of tribal wealth from the river has resulted in disproportionate rates of poverty and mortality to tribal communities compared to non-tribal communities.

With respect to tribal cultural resources, the DEIS limits impacts from the four alternatives to archeological resources. The health and abundance of anadromous fish, including salmon, steelhead, Pacific lamprey and sturgeon are also critical tribal cultural resources and
11 have been since time immemorial. The FEIS should contain the linkages between these fish populations, and their fate under the four alternatives and other presented in these comments with tribal cultural resources. The FEIS must examine the issue of Environmental Justice with
12 respect to all alternatives analyzed.

Specific Comments

- 13 Section 2.2.4 describes that mechanical dredging and some degree of hydraulic dredging would be utilized. This action will cause high levels of turbidity and redistribution of toxics continually into the water column.
- 14 The DEIS preferred alternatives 1,2 and 4 proposes in-water disposal, because upland disposal is too costly. Redistribution of known toxics into the water column from dredged sediments is not adequately addressed in the DEIS.
- 15 The DEIS proposes dredging in probable fall chinook spawning areas in the tailraces of Lower Granite and Lower Monumental dams. Dredging of these areas disturbed and killed listed fall chinook alevins in 1992.
- 16 The DEIS incorrectly states that there will be little risk to anadromous fish during dredging because they will not be present during the activity. Life history analyses from WDFW indicates that a high proportion of juvenile fall chinook overwinter in Lower Snake River reservoirs and will be susceptible to dredging impacts.
- 17 The DEIS declares that the cost and the time required for upland disposal is too great, therefore, in-river disposal, despite impacts, is appropriate. The DEIS must consider environmental impacts as well as cost and time feasibility.
- 18 The proposed alternative has not been placed in context with the NMFS 2000 FCRPS Biological Opinion. The Opinion calls for significant improvements to critical main stem habitat and juvenile and adult salmon and steelhead survival. The proposed alternative is counter to these objectives that the federal government believes is critical to recovery of ESA-listed and treaty reserved

resources. Further, the NMFS Opinion calls for consideration of breaching the four lower Snake Dams if performance standards are not met. Given survival of listed Snake River juvenile steelhead at only 2% in 2001, it is likely that performance standards at 2005 may not be met and breaching must be considered.

19 • The proposed alternative has not been considered from an ecosystem or normative river perspective (Williams et al. 1996). Dredging will continue to degrade critical habitat necessary to expand life history and trophic diversity.

• Alternative Actions. It appears that an authetic, "No Action" alternative is feasible, and that barge operators would simply have to lighten their loads to
20 prevent grounding. The DEIS fails to describe the costs subsidies to the Ports and navigation industry under the four dredging alternatives. These costs will be borne by the American taxpayer. The FEIS should analyze the cost of other transportation methods (ie rail or truck) that, if subsidized as the four dredging alternatives, may be less expensive than the dredging alternatives.

21 • Dredging with in-water disposal alternative. There appears to be no feasible way that silt and sand can be segregated for discrete in-water disposal. The Corps is proposing to monitor the movement of the sediment after it is placed, with no prior hydraulic geometry, other evaluation, or assurance of how fines and sand will be redistributed by river flows and navigation waves.

22 • Dredging impacts invertebrate production. During initial dredging, an estimated 75% of benthic organisms may be removed from the site (Allen and Hardy 1980). While recolonization can occur, it is usually by opportunistic populations less valuable to the trophic chain, and original species diversity is ".....seldom achieved." (Allen and Hardy 1980). Studies of specific dredging sites have indicated that recolonization of invertebrates had not occurred over a ten year period (Allen and Hardy 1980). The DEIS does not examine these impacts thoroughly.

• The DEIS claims that deposition of dredging spoil can create critical salmon habitat. Bennett et al. (1991) noted that two years after dredge disposal, there was a four to five-fold lower level of oligochaete biomass at dredge disposal sites. Higher order Oligochaete populations are indicative of good water quality and
See 22 provide a better nutrient source for feeding salmonids than chironomids, which tend to colonize disturbed river habitat (USFWS 2000). This loss of diversity and lowered levels of secondary productivity indicates a loss of critical salmonid habitat that will be exacerbated with more dredging. Bennett et al. (1991) also noted that steelhead indices were much higher for undisturbed river channel sites than sites where dredging spoils were placed. The only test site where steelhead were not found was a dredge disposal site. Section 2.2.4.1 of the DEIS states that as much as 10% of subyearling fall chinook came from dredging spoils dumped in the river. The DEIS does not describe the percentage of fall chinook production that is directly lost from dredging activity. This should be included in the FEIS.

O-66

23 • Potential water column impacts from dredging include increased turbidity, increased oxygen demand and releases of contaminants including specific toxics, free sulfides and ammonia (Allen and Hardy 1980). Turbidity and resuspension of sediments, including contaminants, typically occur at the dredging site by underwater currents, navigation waves, and continued maintenance dredging (Allen and Hardy 1980).

See 17 • Upland disposal. This alternative offers the least impact to the aquatic biota and anadromous fish, yet the Corps rejects the alternative based upon cost and time to implement.

See 23 • Water quality. Lloyd (1987), Newcombe and MacDonald (1991) and Allen and Hardy (1980) report that high levels of turbidity that can be caused by dredging, will cause impact to salmonids such as stress, to avoidance and direct mortality.

• Our review of the toxic sediment samples indicates that organic and inorganic
24 toxics are contained in samples, which could be impacted and entrained into the water column. We believe that the current samples are insufficient to make conclusions about toxic spread from dredging activity. Indeed, DEIS Section 3.9.1.8.7 notes that recent sampling data for toxic substances are not available where the dredging is proposed; the only information that is available is a 1973 report containing 1972 data. It is likely that more toxic have accumulated in proposed dredging sites due to the operation of Potlatch Mill and other industrial activities since 1972. It is critical that these areas be sampled, the samples analyzed and this information clearly exhibited in the FEIS before any dredging is considered.

• The future of the Potlatch Mill in-river disposal of toxics into the Clearwater
25 River and Lower Granite pool and these toxics being continually entrained in the river from dredging is a significant issue not addressed in the DEIS. This is a key cumulative affects issue that must be addressed in the FEIS.

26 • The impact of a stew of toxic and organic and inorganic contaminants being entrained into the water column by the proposed initial dredging and redisposal into the river environment places salmonid populations at risk. Ewing (1999) notes that through bioaccumulation and chemical transformations, toxics can accumulate in trophic levels to levels much higher than those in the surrounding water column. The impacts of these contaminants can be overt, causing direct mortality. However, they can also be sublethal, impacting the ability of salmonids to survive. These impacts include increases in stress, loss of reproductive capacity, loss of schooling and swimming ability necessary to avoid predators, loss of osmotic and migration capability and lowered resistance to disease from impaired immune response systems. These impacts should be fully described in the FEIS.

See 16 • Anadromous Fish. There will likely be significant numbers of juvenile fall chinook and steelhead present in the Lower Snake River during the proposed work window (December 15-March 1). For example, Sneva (1998 in USFWS 2000), in scale analysis studies, noted that one third of the spawning carcasses in the Grande Ronde and Lower Clearwater Rivers were from juveniles that over wintered in the Lower Snake reservoirs. The determination that these fish reared and over wintered in the Lower Snake reservoirs is based upon PIT-TAG detections of fall chinook that originate above Lower Granite that out migrate as yearlings (Connor 1997 in USFWS 2000). Further, there are likely to be adult steelhead migrating or holding in the vicinity of the proposed dredging sites, because significant numbers of steelhead (>30 adults) can still migrate through the dams (Corps 1996) in December, and although official counts are not initiated by the Corps in February, steelhead, including kelts, can migrate through the dams and reservoirs in February. Further, juvenile spring chinook begin migrations through the reservoirs and could be exposed to proposed dredging impacts (WDFW 1996-2000). These issues should be addressed in the FEIS.

27 • Essential Fish Habitat. The DEIS fails to provide details on critical habitat surveys with respect to spawning steelhead and fall chinook, and rearing areas for these species and spring and summer chinook. Outside of surveys in the dam tailraces, where fall chinook spawning has been documented and fall chinook alevins disrupted by past dredging (Strong 1992b), these surveys have not been conducted. Thus, the DEIS merely speculates that these stocks will not be present in the proposed dredging areas. Surveys should be completed, in consultation with the tribes and state and federal fisheries agencies before dredging is further considered. The results of these surveys should be exhibited in the FEIS.

O-67

Conclusion

CRITFC appreciates the opportunity to provide final comments on the DEIS. In our final assessment, we believe that the DEIS has failed to consider an authentic, "no action" alternative which CRITFC strongly endorses. Current DEIS alternatives that do not include a dam breaching alternative would require an irretrievable commitment of significant federal funds that could prejudice a future dam breaching decision, thus, this alternative should be included in the FEIS. The DEIS failed to consider draw down of Lower Granite pool below msl 733 as an alternative for flood protection, and has failed to consider the impacts of proposed alternatives upon tribal socioeconomics and culture.

There are a number of toxic issues and their impacts on anadromous fish that remain unaddressed; in particular there are no recent toxic sampling data available with respect to proposed dredging sites nor are there recent fish surveys indicating the presence or absence of salmon in the vicinity of proposed dredging area. We strongly recommend that all of these are concerns are fully addressed in the FEIS. Further, the FEIS needs to be integrated with the NMFS 2000 FCRPS Biological Opinion and protection of treaty trust resources. In addition, it appears that the cumulative effects analysis is incomplete.

28 It is critical that the Walla Walla District and Region 10 conduct government-to-government consultations with our member tribes regarding the DEIS and development of the FEIS and ROD. We would be glad to facilitate such consultations.

Given the depth and extent of the foregoing issues, we believe that substantial time will be required before EPA and the Corps complete the FEIS. Until that time and until a ROD is issued, we expect that no dredging actions will be taken. Should you have questions regarding these comments, please contact Bob Heinith at (503) 731-1289.

Sincerely,

Don Sampson
Executive Director

Cc: Commissioners, Tribal program managers, NMFS, USFWS

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References

Allen, K.O. and J.W. Hardy. 1980. Impacts of navigational dredging on fish and wildlife: a literature review. Offices of Biological Services. United States Fish and Wildlife Service. Washington, D.C.

Arkoosh, M.R. and six coauthors. 1998. Increased susceptibility of juvenile chinook salmon from a contaminated estuary to *Vibrio anguillarum*. Transactions of the American Fisheries Society. 127:360-374.

Bennett, D.H., J.A. Chandler and G. Chandler. 1991. Lower Granite Reservoir-in water disposal test. To Walla Walla District Corps of Engineers. By Department of Fish and Wildlife Resources. University of Idaho, Moscow, Idaho.

CH 2 M Hill. 1999. Human effects analysis of the Multi-Species Framework Alternatives. Prepared for the Northwest Power Planning Council. Portland, Oregon.

Corps. 1996. Annual Fish Passage Report. Prepared by the Portland and Walla Walla Districts.

Ewing, R.D. 1999. Diminishing returns: salmon decline and pesticides. Oregon Pesticide Education Network.

Lloyd, D.S. 1987. Turbidity as a water quality standard for salmonid habitats in Alaska. North American Journal of Fisheries Management. 7:34-45.

Newcombe, C.P. and D.D. MacDonald. 1991. Effects of suspended sediments on aquatic ecosystems. North American Journal of Fisheries Management. 11:72-82.

Strong, T. 1992a. June 8, 1992 comments to Lt. Colonel R.D. Voltz on Walla Walla District Environmental Assessment and Supplemental Biological Assessment for additional dredging of a barge/towboat approach channel to the Permanent Juvenile Fish Facility at Lower Monumental Lock and Dam. Columbia River Inter-Tribal Fish Commission. Portland, Oregon.

Strong, T. 1992b. August 6, 1992 comments to Lt. Colonel R.D. Voltz on Walla Walla District FONSI for the Environmental Assessment and Supplemental Biological Assessment for additional dredging of a barge/towboat approach channel to the Permanent Juvenile Fish Facility at Lower Monumental Lock and Dam. Columbia River Inter-Tribal Fish Commission. Portland, Oregon.

Strong, T. 1997. October 30, 1997 comments to Lt. Colonel D.R. Curtis Jr., Walla Walla District on Environmental Assessment for Proposed Navigation Dredging on the Lower Snake and Clearwater Rivers. Columbia River Inter-Tribal Fish Commission. Portland, Oregon.

USFWS. 2000. Appendix M, Fish and Wildlife Coordination Act Report. *Draft Lower Snake River Juvenile Salmon Mitigation Feasibility Report/Environmental Impact Statement*. Portland, Oregon.

USFWS. 1997. November 7, 1997 comments from K.R. Campbell, USFWS, to Lt. Colonel D.R. Curtis, Jr. Walla Walla District on Environmental Assessment for Proposed Navigation Dredging on the Lower Snake and Clearwater Rivers.

Vincaya Chemical Laboratories, Inc. 2000. Analysis of sediments in the proposed dredging area for Corps of Engineers Environmental Assessment: Interim Lower Snake, Clearwater and Mid-Columbia Rivers Dredging. Miami, Florida.

Williams, R. and eleven coauthors. 1996. *Return to the River*. Northwest Power Planning Council. Portland, Oregon.

O-68

Organization
Columbia River Inter-Tribal Fish Commission
Comment 1
The following comments supersede our preliminary DEIS comments submitted to the Corps on January 7, 2002. Until the NEPA process is finalized an authentic "no-action" alternative, no-dredging, must, by default, be implemented.
Response
The Corps does not plan to dredge under normal circumstances until the Record of Decision for the DMMP/EIS has been signed. Should an emergency situation arise, the Corps could perform limited dredging prior to or concurrent with NEPA compliance.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 2
We remind the Corps and EPA, that, as department of the government of the United States, they have a trust responsibility to protect and uphold treaty resources of the Columbia River Treaty tribes.
Response
Your comment is noted.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 3
We concur with the January 18, 2002 comments of the Nez Perce Tribe regarding government-to-government consultations between the Corps and EPA and CRITFC's member tribes regarding proposed DEIS alternatives and potential actions. Consultation is the bilateral decision making process between sovereigns that leads up to and included a decision. EPA and the Corps must engage our member tribes in formal consultation at the policy level before making a decision about a preferred alternative in the final EIS (FEIS) and the Record of Decision (ROD). This is consistent with EPA's July 16, 2001 Region 10 Tribal Consultation Framework and the Corps nationwide policy of consultation with Native American tribes.
Response
The Corps is continuing with Government-to-Government consultation with the Tribes and intends to complete the consultation prior to signing the Record of Decision.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 4
All four DEIS alternatives involve active dredging of the Lower Snake River and McNary Pool. We are unsure as to what the scoping for this DEIS entailed, however, other alternatives should have been considered for analysis and should be included in a Final EIS.
Response
All alternatives identified during the scoping process were evaluated. See Section 6.1 of the DMMP/EIS for a description of the scoping and public involvement process, including concerns offered and issues raised through the scoping process.

O-69

Organization
Columbia River Inter-Tribal Fish Commission
Comment 5
One of these (additional alternatives that should be analyzed) are actions to limit sediment input into the Lower Snake River such as land conservation methods to reduce sediment influxes into the river.
Response
Reducing sediment input from the Snake River watershed was considered. However, it would not preclude the need to dredge periodically. The Corps plans work through the Local Sediment Management Group to encourage land use managers to adopt practices that would reduce sediment input.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 6
Another alternative that should be included in a final EIS (FEIS) is the breaching of the four Lower Snake dams. The NMFS 2000 Section 7 Biological Opinion provides performance standards and check in periods with the ultimate possibility of recommending that the Lower Snake dams are breached. Given the historical low survival rate of Snake River juvenile salmon and steelhead in 2001, it is likely that performance standards will not be met and the dams may be breached. Further, CRITFC views that alternatives 2, 3, and 4 would involve irretrievable commitment of federal funds to structures and alternatives that could, from a cost perspective, prejudice dam breaching in the future. Thus, this alternative should be fully analyzed in the FEIS.
Response
The relationship between the Lower Snake River Juvenile Salmon Migration Feasibility Study (LSRJSMFS) and this DMMP is detailed in Section 1.6 of the DMMP/EIS. Breaching the four lower Snake River dams would not meet the project purpose and need of maintaining Congressionally authorized navigation on the lower Snake River, therefore that alternative was not included in this DMMP/EIS. The LSRJSMFS did evaluate breaching and its findings are incorporated by reference. Selection of any of the four viable alternatives presented in the DMMP/EIS would not prejudice possible dam breaching in the future. The LSRJSMFS can be found on the Corps' website: www.nww.usace.army.mil/lsr/.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 7
Thus we believe the Corps and EPA should include an analysis and alternative of temporarily drawing down of Lower Granite Pool to msl 710 in the FEIS. We believe that this operation under flood flows would also serve to move large amounts of sediments in the confluence area through the pool and downstream, thus, facilitating navigation in the long run.
Response
Drawing down the Lower Granite Pool to 710 msl has been discussed and analyzed by the Corps and NMFS. The NMFS 2000 Biological Opinion on the Federal Columbia River Power System

discusses minimum operating pool (MOP). The Reasonable and Prudent Alternatives (RPA) call for operation of all four lower Snake River dams at MOP from April 3 until adult fall chinook salmon begin to enter the Snake River (usually in early September). This is to increase water velocity through these four dams and thus decrease the travel time of migrating juvenile salmon. Once adult salmon begin to return, the pools at three of the four dams are refilled to meet the fish ladder gate depth criteria for adult salmon passage. The pool at Lower Granite Dam is kept at MOP levels, however, until November 15, after natural cooling has taken place.

In particular, while the Corps may operate the dam reservoirs of the four lower Snake River dams between full pool and MOP, the Corps may not operate the dams below MOP without coming into conflict with other statutory uses that the dams serve. For example, each of the four dams contains a system of locks that allows for boat traffic up and down the lower Snake River. This was an express purpose of Congress when the dams were authorized. Operating the dams below MOP would prevent the largest barges for which the dams were designed from passing. Moreover, operation of the dams below MOP, at the wrong time of year, has substantial adverse impacts upon salmon migration.

Also, see response to Washington Department of Fish and Wildlife's comment 2.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 8
The DEIS lacks an authentic, "no action" alternative, where no dredging would occur and other actions would take place to ensure navigation is maintained. Vessels with lighter loads could still navigate the lower Snake River without maintaining the navigation channel at a specific depth.
Response
The Corps is using the interpretation of "no action" as "no change" from the current management direction. This interpretation is described in the Council on Environmental Quality publication "NEPA's Forty Most Asked Questions". See Response to Save our Wild Salmon's comment 6. The Corps also evaluated non-dredging methods to address the sedimentation problem, but none of them were totally effective is addressing the problem. See also response Save our Wild Salmon's comment 29 regarding the feasibility of light-loading barges in lieu of dredging.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 9
We understand that the Corps is authorized by Congress to provide navigation but we don't believe this means maintaining an explicit 14 foot depth.
Response
Your comment is noted.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 10
Appendix C, Economic Analysis in the DEIS fails to describe, and much less analyze, the continuing and cumulative impacts of the four alternatives in the DEIS on tribal communities using methods and data described in Meyer Resources (1999). This is a significant failing in the DEIS because the socioeconomic impacts of the four alternatives are not defined in relationship to economic impacts to tribal communities.
Response
With regard to the Meyer Resources (1999) report it assesses impacts to tribal circumstances in terms of: 1) tribal ceremonial, subsistence, and commercial harvests of salmon and steelhead; and 2) tribal access to flooded lands valuable to tribes. The report also discusses tribal views with regard to beneficial effects to salmon, estimated time of removal of salmon from the Endangered Species List, and other related issues. The Meyer Resources report can be found on the Walla Walla District website linked to the LSR information (www.nww.usace.army.mil/lsr). The analysis of salmon recovery and harvest levels presented in the Tribal Circumstances report are based on preliminary numbers, as noted in the Lower Snake River Juvenile Salmon Migration Feasibility Report/Environmental Impact Statement, Section 5.8-1. The LSR evaluations and analysis is incorporated by reference. Although the analytical methods used in this FEIS to determine the cumulative impacts of the alternatives to tribal communities are different from Mr. Meyer's methods, the DMMP/EIS adequately considered and analyzed the impacts (see Sections 4.14 and 4.15).

Organization
Columbia River Inter-Tribal Fish Commission
Comment 11
With respect to tribal cultural resources, the DEIS limits impacts from the four alternatives to archaeological resources. The health and abundance of anadromous fish, including salmon, steelhead, Pacific lamprey and sturgeon are also critical tribal cultural resources and have been since time immemorial. The FEIS should contain the linkages between these fish populations, and their fate under the four alternatives and others presented in these comments with tribal cultural resources.
Response
The Corps acknowledges the importance of the Columbia/Snake River fishery to Native American communities both as a food source and as a spiritual and cultural resource. However, based on the analysis of the environmental impacts of the DMMP alternatives and consultations with resource agencies, significant adverse effects on aquatic resources, including salmon and steelhead, are not anticipated to result from the proposed action.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 12
The FEIS must examine the issue of Environmental Justice with respect to all alternatives analyzed.
Response
The draft DMMP/DEIS concluded that none of the alternatives considered in detail would cause a disproportionately high and adverse effect on low-income or minority populations in the area.

Furthermore, no alternative considered in detail would cause greater adverse impacts on local fishing or down river fishing. The four alternatives considered in detail, including the no action alternative, would have indirect, minor, short-term effects on aquatic species. Two of the four alternatives, including the preferred alternative, would provide potential beneficial effects to aquatic resources through the implementation of beneficial uses of dredged material, such as creation of woody riparian habitat and/or shallow water fish habitat.

Given the fact that no substantial adverse impacts are anticipated, and the dispersed nature of most of the impacts that would be likely to occur, the Corps concluded in the Draft DMMP/EIS that impacts would not be likely to be high, adverse, nor fall disproportionately on any demographic group in the project area. The discussion of environmental justice analysis is presented in greater detail in Section 4.6 of the Final DMMP/EIS.

The DMMP/EIS alternatives were considered in detail to determine their specific impacts, the alternatives, and the one recommended, would not disproportionately adversely affect low-income, minority populations, sport fishing activities, or commercial fishing activities.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 13
Section 2.2.4 describes that mechanical dredging and some degree of hydraulic dredging would be utilized. This action will cause high levels of turbidity and redistribution of toxics continually into the water column.
Response
Increases in turbidity due to dredging are expected to be localized to the immediate area of the dredging and disposal activities, and be limited to the duration of the dredging project. During implementation of the DMMP, the dredged material evaluation framework will guide evaluation of the potential water quality impacts for dredging and dredged material management activities. A sampling analysis plan and monitoring plan will be developed for each individual dredging project. Prior to dredging, sediments to be dredged will be sampled and analyzed for grain size distribution and selected chemical constituents. Results will be used to develop a site-specific monitoring plan, which will be implemented to minimize impacts to downstream water quality. Monitoring will include turbidity, ammonia, temperature, and pH, along with other chemical constituents if sediment sampling results indicate potential for partitioning of chemical constituents from sediments into water. Site-specific sampling data and monitoring plans will be reviewed by appropriate water quality regulatory agencies prior to dredging as part of the Clean Water Act 401 certification process. Information gathered during each dredging activity will evaluated when planning for future dredging projects within in the 20-year period. Monitoring conducted by the Corps during previous dredging and disposal activities has indicated that turbidity levels do not exceed state requirements.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 14
Redistribution of known toxics into the water column from dredged sediments is not adequately addressed in the DEIS.
Response

See response to comment 26 below.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 15
The DEIS proposes dredging in probable fall chinook spawning area in the tailraces of Lower Granite and Lower Monumental dams. Dredging of these areas disturbed and killed listed fall chinook alevins in 1992.
Response
Eggs and alevins were discovered while dredging in front of the Juvenile Fish Facility and Powerhouse, however, not on the navigation lock side of the river. All dredging in the tailrace of Lower Monumental Dam covered under the DMMP will occur in the navigation channel. It is believed that the velocities on the navigation lock side of the river in this location are insufficient for attracting fish to spawn in these locations. Multiple years of survey occurred after 1992 and no redds were ever found again downstream from Lower Monumental Dam (Dauble et al 1998). The NMFS Biological Opinion (2000) indicates, in section VII.C.1.3., the Corps will not dredge in the tailraces of the dam until redd surveys have been completed (Appendix F).

Organization
Columbia River Inter-Tribal Fish Commission
Comment 16
The DEIS incorrectly states that there will be little risk to anadromous fish during dredging because they will not be present during the activity. Life history analyses from WDFW indicates that a high proportion of juvenile fall chinook overwinter in lower Snake River reservoirs and will be susceptible to dredging impacts.
Response
Fall chinook typically have an ocean type rearing life history and typically outmigrate seaward during the summer as subyearlings. (Tiffan et al, 2001). According to Williams and Bjornn 1998, "A small proportion of hatchery and natural subyearling fall chinook salmon residualized and migrated early in spring 1997; however, as with fish released in 1995, the number that overwintered and migrated seaward as yearlings in spring was small and did not effect survival estimates." This indicates that a small proportion of fall chinook may over winter every year. Despite this, the draft DMMP/EIS states in Appendix F that proposed activities are likely to adversely affect fall chinook salmon by dredging. NMFS' Biological Opinion is included in Appendix F.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 17
The DEIS declares that the cost and time required for upland disposal is too great, therefore, in-river disposal, despite impacts is appropriate. The DEIS must consider environmental impacts as well as cost and time feasibility.
Response
The DMMP/EIS does consider environmental impacts of the upland disposal alternative (see Section 4; Table 4-1 presents a summary of environmental impacts of each alternative). The

Corps has determined the upland disposal alternative would not have as much environmental benefit as in-river disposal to create juvenile fall chinook rearing habitat or creation of woody riparian habitat along the shoreline. It is the Corps' policy to dispose of dredged material in a manner that is the least costly, is consistent with sound engineering practice, and that meets Federal environmental standards. In their Biological Opinion (2000), the NMFS has indicated support for the in-water disposal and riparian habitat creation as proposed.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 18
The proposed alternative has not been placed in context with the NMFS 2000 FCRPS Biological Opinion.
Response
On the contrary, creating habitat in the mainstem river, where there is currently none or poor habitat, is consistent with the NMFS Biological Opinion (2000). This, in combination with the Woody Riparian Habitat Program through the Lower Snake River Compensation Plan, is meant to create significant mainstem habitat improvements. The Biological Opinion Action 155, which states " BPA, working with the Corps will take immediate steps to begin to address these uncertainties by collecting baseline data, improving mainstem reaches in ways that mimic the range and the diversity of historic habitat conditions as much as possible, and monitoring and evaluating the results. For this project, the Corps has met the baseline data gathering and is now attempting to mimic the habitat that was in place prior to the hydrosystem completion.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 19
The proposed alternative has not been considered from an ecosystem or normative river perspective (Williams et al. 1996). Dredging will continue to degrade critical habitat necessary to expand life history and trophic diversity.
Response
In proposing to alter habitat in the reservoir from little to more shallow water shoreline habitat, the Corps is attempting to create habitat diversity within the reservoir in an attempt to mimic what was there before the hydrosystem. Dredging backwater areas such as boat basins, irrigation intakes, etc., which are primarily composed of silt, is not expected to impact salmonid habitat. The NMFS Biological Opinion (Appendix F) addresses this issue and states "the [Corps] would study backwater areas targeted for dredging and determine the spatial and temporal distributions of rearing salmonids, as well as identify key habitat attributes that explain the distributions." Dredging the mainstem Snake River in the confluence area and at Schultz Bar is meant to remove sandy material, but because it is typically in the thalweg (main flow) of the channel, it is less used by rearing and migrating fish. Restoring the navigation channel at some locations, from 12 feet deep to up to 16 feet deep in a 250-foot wide channel, is not expected to change the hydraulics sufficiently to alter fish use of the area in the future.

Organization
Columbia River Inter-Tribal Fish Commission

Comment 20
The DEIS fails to describe the costs subsidies to the Ports and navigation industry under the four dredging alternatives. The FEIS should analyze the cost of other transportation methods (i.e. rail or truck) that, if subsidized as the four dredging alternatives, may be less expensive than the dredging alternatives.
Response
Section 7a of the Department of Transportation (DOT) Act of 1966 (Public Law 89-670) requires the use of prevailing rates in determining the feasibility of Federal inland navigation projects. In the case of existing waterways such as the Columbia-Snake River waterway, prevailing competitive similar rates are the best available approximation of long-run marginal costs. The method to determine a navigation project's feasibility involves the comparison of the cost of transporting the goods and commodities to and from the study area by various modes of transportation including barge, rail and truck. These comparisons depend on published rates or negotiated rates prevailing at the time of the study. Federal funding or subsidy is reflected in nearly all of these rates, some more than others. The methodology used in this DMMP/DEIS and that prescribed for Congressional authorization of inland waterway navigation improvements does not use rates under Federal funding parity.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 21
Dredging with in-water disposal alternative. There appears to be no feasible way that silt and sand can be segregated for discrete in-water disposal. The Corps is proposing to monitor the movement of the sediment after it is placed, with no prior hydraulic geometry, other evaluation, or assurance of how fines and sand will be redistributed by the river flows and navigation waves.
Response
Particle size analysis performed as part of the pre-dredging sediment sampling helps the Corps determine which dredging areas are mostly silt and which areas are mostly sand and larger-sized sediments. Prior to any dredging, samples will be collected and analyzed for physical characteristics per Appendix J (Dredged Material Evaluation Framework) of the DMMP/EIS. For the initial dredge projects, applicable components of the Lower Columbia Sediment Evaluation Framework will be used to determine if materials to be dredged are suitable for in-water disposal. Only materials not exceeding 30% silt will be allowed for in-water disposal.

Sediment data collected from the river have indicated that it is reasonable to assume that the proposed locations for in-water disposal are areas where sediments tend to settle out of the water column instead of being transported to other locations in the river. It is possible that waves caused by passing traffic on the river may cause some localized movement of materials, but the locations will still tend to maintain velocities that are low enough to promote settlement of sediments out of the water column. Monitoring during and after dredging will verify the stability of created habitat areas, see DMMP/EIS Monitoring Plan (Appendix M).

Organization
Columbia River Inter-Tribal Fish Commission
Comment 22
Dredging impacts invertebrate production. The DEIS does not examine these impacts thoroughly.
Response

"Routine maintenance dredging causes short-term disruption of bottom faunas, but there is little evidence that the disturbance is long-term." (Allen and Hardy 1980) In addition, for "new work" dredging (i.e., dredging of previously undisturbed river bottom) replacement fauna may take two years to repopulate an area. (Allen and Hardy 1980). Bennett et. al. (1995) reports: "increased benthic invertebrate abundance in disposal areas... benefits ... the (Lower Granite Reservoir) system." The proposed construction of shallow water benches is expected to create more invertebrate production and/or collection along the shorelines, where fall chinook rear as juveniles.

Although Bennett et. al. (1991) indicated that the oligochaete biomass was lower at the disposal areas, he demonstrated that the mid-depth disposal area took approximately four years to achieve parity with the reference stations. This is despite all benthic stocks showing decreasing trends over a five-year time period leading up to the drawdown test in Lower Granite Reservoir (Bennett et. al. 1993). In addition, Curet 1993 reported that the most important food items to fall chinook in the reservoirs were Cladocerans, Ephemeropterans, Homopterans and Dipterans, composing 96% of their diets. Oligochaetes were not mentioned.

Increasing shallow water habitats in the reservoir would actually increase habitat diversity on the larger scale.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 23
Potential water column impacts from dredging include increased turbidity, increased oxygen demand and releases of contaminants including specific toxics, free sulfides and ammonia (Allen and Hardy 1980).
Response
The DMMP/EIS acknowledges the likely water quality impacts that would result from dredging and dredged material management activities. However, increases in turbidity and other water quality impacts are expected to be localized and temporary. See Response to comment 13 above.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 24
We believe that the current samples are insufficient to make conclusions about toxic spread from dredging activity.
Response
Existing sample analyses along with additional sampling prior to dredging would fulfill regulatory requirements to protect water resources and fish and their habitat. The methodology for dredge sampling is contained in Appendix J (Dredged Material Evaluation Framework) of the DMMP/EIS. Additional information concerning monitoring requirements during dredging is contained in NMFS' Biological Opinion (2000) and the Monitoring Plan (Appendices F and M).

Organization
Columbia River Inter-Tribal Fish Commission

Comment 25
The future of the Potlatch Mill in-river disposal of toxics into the Clearwater River and Lower Granite pool and these toxics being continually entrained in the river from dredging is a significant issue not addressed in the DEIS. This is a key cumulative effects issue that must be addressed in the FEIS.
Response
Section 4.15 of the DMMP/EIS has been revised to provide additional detail on the cumulative effects analysis. Regarding cumulative effects, the comment is correct in that future water quality permitting decisions for Potlach were not specifically discussed in the cumulative effects analysis. However, the long-term effects of discharges from Potlach and other sources throughout the project area have been considered in the evaluation of water and sediment quality. The effects of industrial and municipal discharges to waterways in the project area are reflected in the water quality and sediment quality data that the Corps has used in developing and evaluating dredged material management alternatives (as documented in the DMMP). The Corps will continue to sample and analyze sediments and use these dataset in the future. Based on the existing data and the regulatory history of dredging and dredged material management, significant direct, indirect, or cumulative impacts are not anticipated to result from the proposed action.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 26
The impact of a stew of toxic and organic and inorganic contaminants being entrained into the water column by the proposed initial dredging and redisposal into the river environment places stamonid populations at risk.
Response
Prior to any dredging, the proposed areas will be sampled and analyzed per the guidance of a dredged material evaluation framework. DMMP/EIS Section 3.9 presents a discussion of the status and applicability of the dredged material evaluation framework. The results of these analyses will evaluate the potential effects on salmonids and other potentially affected species and, if dredging can be done, will determine the dredging methodology, amount and type of monitoring needed during dredging, and where the excavated materials will be relocated to, either in-water or on land.

Organization
Columbia River Inter-Tribal Fish Commission
Comment 27
Essential Fish Habitat. The DEIS fails to provide details on critical habitat surveys with respect to spawning steelhead and fall chinook, and rearing areas for these species and spring and summer chinook. Surveys should be completed, in consultation with the tribes and state and federal fisheries agencies before dredging is further considered. The results of these surveys should be exhibited in the FEIS.
Response
These issues are addressed in the DMMP in Appendix F. Appendix F outlines fall chinook behavior and life stages in the project area and indicates that proposed activities would likely adversely affect fall chinook salmon. However, the Corps would be producing a long term benefit to these salmonids by creating rearing habitat. The Draft DMMP/EIS addresses Snake River

Basin steelhead on pages 48-50, covering behavior and life stages in the project area and determined that proposed activities would likely adversely affect juvenile fish by dredging, however, not likely adversely affect adult passage based on the type of dredging involved. In addition, the Draft DMMP/EIS addresses Snake River Basin Spring/Summer-Run Chinook on pages 45-48 indicating that proposed activities are likely to adversely affect overwintering and rearing fish of these runs.

Substrate surveys have indicated that most of the areas that will require dredging do not contain the adequate substrate size for spawning fall chinook and steelhead. This, in combination with the water velocities required for incubating redds, leaves only the tailraces of the dams as areas that were adequate for spawning. The NMFS Biological Opinion (2000) indicates, in section VII.C.1.3., the Corps will not dredge in the tailraces of the dam until redd surveys have been completed, as anticipated by the Corps (see Appendix F).

Organization
Columbia River Inter-Tribal Fish Commission
Comment 28
It is critical that the Walla Walla District and Region 10 conduct government-to-government consultations with our member tribes regarding the DEIS and development of the FEIS and ROD.
Response
The Corps has initiated Government-to-Government consultation with the affected Tribes and plans to complete consultation prior to signing the ROD.

NEZ PERCE TRIBE TREATY OF 1855

Nez Perce

TRIBAL EXECUTIVE COMMITTEE
P.O. BOX 305 • LAPWAI, IDAHO 83540 • (208) 843-2253

January 15, 2002

Department of the Army
Walla Walla District, Corps of Engineers
ATTN: Dredged Material Management Plan
201 North Third Avenue
Walla Walla, Washington 99362-1876

RE: Draft Dredged Material Management Plan and Environmental Impact Statement, McNary Reservoir and Lower Snake River Reservoirs

To Whom It May Concern:

O-75

The Nez Perce Tribe appreciates the opportunity to comment on the draft Dredged Material Management Plan and Environmental Impact Statement (DMMP/EIS). After reviewing this document, the Nez Perce Tribe has concluded that implementation of any
1 of the alternatives presented in the draft DMMP/EIS, including the preferred alternative, would likely seriously degrade the fishing resource, and so cause irreparable harm to fish species protected under the Endangered Species Act (ESA). In addition, such action
2 would adversely impact federally and judicially confirmed treaty rights of the Nez Perce Tribe.

In 1855, the United States negotiated a treaty with the Nez Perce Tribe. Treaty of June 9, 1855, with the Nez Perce Tribe, 12 Stat. 957 (1855). In Article 3 of the Treaty, the Nez Perce Tribe explicitly reserved to themselves certain rights, including the exclusive right to take fish in streams running through or bordering the Reservation, "the right to fish at all usual and accustomed places in common with the citizens of the Territory; and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed lands." These rights include the right to fish within the project area identified in the draft DMMP/EIS, and the right to fish for those salmon and steelhead passing through the Lower Snake River.

The Nez Perce Tribe has a treaty-secured interest in these natural resources. This guaranteed right has repeatedly been recognized and reaffirmed by the federal courts. However, this guaranteed right is meaningless if the fishery and the habitat that supports the fishery is not protected and preserved.

Salmon are integral to the spiritual, physical, and economic health of the Nez Perce Tribe. The Tribe reveres the fishery and the waters that support it for the life and sustenance these resources have given, and continue to provide Tribal members. The Snake River corridor is an important migratory route for threatened spring, summer, and fall chinook salmon, as well as steelhead fish. Adults use the Snake River to access spawning habitat located throughout the Clearwater Basin. Salmon and steelhead smolts use the same corridor to return to the ocean. Any activities that potentially threaten these very important resources are of great concern to the Tribe.

The Nez Perce Tribe commends the Army Corps of Engineers (Corps) for their response in the draft DMMP/EIS to some of the concerns raised in our November 13, 2000 comments on the Draft Interim Lower Snake, Clearwater, and Columbia Rivers Dredging Environmental Assessment. We also commend their concern with habitat improvement and beneficial us of dredged material. Major concerns, though, remain regarding the proposed dredging plan alternatives, including the preferred alternative.

The following are the Nez Perce Tribe's comments. We also incorporate by reference the comments of the Columbia River Inter-Tribal Fish Commission.

General Comments

A. Endangered Species Act Issues

1. Critical Habitat

The draft DMMP/EIS acknowledges that the project area is designated critical habitat for all four Snake River salmon ESU stocks. The Lower Snake River and McNary Reservoir are designated as critical habitat for migration passage of wild Snake River sockeye. The document also states that since dredging will occur when those fish are not present, there is no deleterious impact to their habitat. The ESA, however, defines a destruction or adverse modification to be a "direct or indirect alteration that diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alteration adversely modifying any those physical or biological attributes that were the basis for determining the habitat to be critical."50C.F.R., § 402.02. The presence or absence of the species at the time of the
3 alteration is not a factor. The draft DMMP/EIS also acknowledges that critical habitat attributes and EFH components suitable for potential rearing or overwintering for Snake River Spring/Summer chinook salmon are likely to be present in the proposed project areas during the winter in-water work window and in November at the Joso site. These habitat components would be adversely affected by any dredging activities. The draft
4 DMMP/EIS does not give any information on critical habitat for fall chinook or bull trout. Impacts to critical habitat for these species need to be provided.

Additionally, the draft DMMP/EIS states that since dredging will only occur in the main navigation channels that critical habitat areas near shore will not be impacted. Even if

those areas will not be directly impacted, they will be affected since the river is a system,
5 and it is impossible to impact one area without also impacting nearby areas. Thus, the adverse impacts would be indirect ones, which are not allowed under the ESA.

2. Endangered Fish

6 The draft DMMP/EIS acknowledges that some adult steelhead may be in the areas proposed for dredging and disposal during proposed dredging periods. The stated mitigation approach is to dredge when these species are less likely to be present, and to use clamshell dredges, which are unlikely to entrain fish. Both these approaches are inadequate to protect fish. The dredging will release sediment and toxic substances that will adversely impact any fish that are present. Although, fish do try to leave an area due to noise and other stimuli, this reaction cannot be counted on to assure that fish will not be directly harmed from the dredging even if entrainment does not occur.

The draft DMMP/EIS also states that the only known bull trout population in the project area, that in the Tucannon River, is considered a healthy one, and so does not address possible harm to that species. It is important, though, that healthy populations of ESA-listed species be particularly protected since they are the basis for that species' recovery.
7 Thus, possible impacts to Tucannon River bull trout must be included in the draft DMMP/EIS.

8 The draft DMMP/EIS does not address possible harm to fall chinook salmon, which have been observed overwintering in the project area. Sub-yearling fall chinook would be particularly vulnerable to impacts from dredging.

B. Usability of Dredged Material

The feasibility of all alternatives, particularly the preferred alternative (Alternative 4), depends on the usability of the dredged material. Despite the statement in the draft
9 DMMP/EIS that it is improbable that dredged material would be even moderately contaminated, the data on which that conclusion is based is data from 1997 and 1998. It is highly likely that more recent data would show different results, especially in light of effluent from the Potlatch pulp and paper mill and agricultural runoff. Much of the dredged material could be highly toxic and contain contamination at a level that would not meet water quality standards. Thus, it would be unsuitable for in-water disposal or other proposed beneficial uses.

10 Furthermore, the draft DMMP/EIS does not give adequate information on how the usability of dredged material will be determined. It states that whenever a load of dredged material visually looks like it may be contaminated, tests will be done. A visual analysis, though, is far from being an adequate indication of the presence of contamination. Also, the draft DMMP/EIS does not state what analyses would be done on the material, nor the percentage of the dredged material that would be analyzed. Importantly, how would the cost of these analyses impact the feasibility of the proposed alternatives?

O-76

The Nez Perce Tribe concurs with the assessment in the draft DMMP/EIS that upland disposal of dredged material will have adverse effects on terrestrial wildlife. The Joso site is managed as a wildlife habitat management unit (HMU), and the Chief Timothy site borders an HMU. Disposal at either area would have harmful impacts on efforts to provide habitat for wildlife. The mitigation proposed in the draft DMMP/EIS (in Section
11 4.2.5) of purchasing new land would not truly compensate for the loss of habitat. Wildlife would still be displaced, and there is no guarantee that the habitat in the purchased land would be as suitable.

C. Creation of In-water Habitat for Fish

The draft DMMP/EIS proposes the creation of shallow-water habitat as a major disposal method for dredged material and a prominent mitigation measure. While the Nez Perce Tribe applauds the Corps' efforts to benefit aquatic resources, there is a notable lack of
12 references to research confirming that the proposed construction of that habitat will be stable and lasting. River currents and high flows during spring runoff could easily erode any constructed shallow water habitat, not only destroying the habitat itself, but also creating increased turbidity. The draft DMMP/EIS is similarly lacking in references to research showing that macroinvertebrates and fish actually use such constructed shallow water habitat. The Lower Snake River, which has several ESA-listed fish species, is not an appropriate place to experiment on construction of fish habitat. There is also the issue of whether the dredged material is suitable for in-river disposal, as stated above.

D. Tribal Trust Responsibility and Government-to-Government Consultation

In Executive Order 13084, President Clinton provided that "each agency shall have an effective process to permit elected officials and other representatives of Indian tribal governments to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities." According to President Clinton's April 24, 1994 memorandum regarding Government-to-Government Relations with Native American Tribal Governments, federal agencies "shall assess the impacts of Federal Government plans, projects, proposals, and activities on tribal trust resources and assure that Tribal government rights and concerns are considered during the development of such plans, projects, proposals, and activities." As a result Federal agencies must proactively protect tribal interests, including those associated with tribal culture, religion, subsistence, and commerce. Consultation with Tribes is a vital component of this process.

Consultation is the formal process of negotiation, cooperation, and mutual decision-making between two sovereign nations: the Nez Perce Tribe and the United States. Consultation is the process that ultimately leads to the development of a decision, not just a process or a means to an end. The most important component of consultation is the ultimate decision. Consultation does not mean notifying the Tribe that an action is proposed, requesting written comments on that prospective action, and then proceeding with the action.

13 The Corps has not complied with its own policy guidance on tribal trust and consultation in the preparation of the draft DMMP/EIS. That guidance states that the Corps will work to meet trust obligations, protect trust resources, and obtain tribal views of trust and treaty responsibilities or actions related to the Corps. Further, the guidance states that the Corps will reach out and involve tribes in collaborative processes to ensure information exchange and disparate viewpoints before and during decision making. The single meeting in April, 2001 was not a meeting in which policy decisions were made. It also only addressed cultural resource issues, and was time-limited. Consultation was initiated, but certainly not completed.

The Nez Perce Tribe requested an extension of the deadline for comments so that they would have adequate time to review the draft DMMP/EIS. The comment period was short, and spanned the Christmas and New Year's holidays. It was insufficient time for review of the extensive documents comprising the draft DMMP/EIS, and obtaining the necessary approval of the comments by the Nez Perce Tribal Executive Committee. In response, the Corps required draft comments by the original comment deadline, only allowing eleven extra days, until January 18, 2001, for the final comments. This time
14 limitation does not meet the spirit or letter of tribal consultation requirements.

Additionally, the draft DMMP/EIS states that a Local Sediment Management Group (LSMG) has been formed, which will assist in the development and adoption of appropriate methods in the management of dredging and disposal of dredging materials. This group will have considerable influence on important decisions and actions related to dredging. The group, however, has no members from the Nez Perce or other Indian
15 tribes. The Tribes are among those groups the draft DMMP/EIS indicates will be asked to participate only on an as needed basis. All dredging and most of the disposal options for dredged materials impact fish and their habitat, and so also impact the Nez Perce Tribe's treaty-reserved resources. Thus, under federal guidelines, including those of the Corps, consultation must take place with the Nez Perce Tribe.

E. Environmental Justice

A Presidential memorandum accompanying Executive order 12898 cites the NEPA process as an opportunity for agencies to address the environmental injustice of disproportionate impacts. Currently, the Nez Perce Tribe harvests less than 1 percent of traditional salmon harvest levels. Traditional roots and berries are becoming increasingly rare. The decimation of salmon runs and the disappearance of other traditional foods have seriously impacted the Tribal economy. Today, Tribal members face a poverty rate of almost 30%, and winter unemployment rates of 62%. The draft DMMP/EIS finds that there are no disproportionate impacts of the project on the Nez Perce Tribe or its
16 members. Any impacts on salmon, which all the alternatives have, have a disproportionate impact on the Nez Perce Tribe. The statement in the draft DMMP/EIS (section 4.15.1) that the sediment plumes created by DMMP actions would be harmless to fish is based on a 1945 literature survey, and cannot be credibly used in the current situation. The statement (section 4.15) that no significant changes are expected in water quality from toxic substances, if based on the data presented in the draft DMMP/EIS,

O-77

must be re-evaluated with more current data and in light of new, stricter toxic standards. The evaluation must also consider human health impacts, and the increased impact on tribal members who consume greater quantities of fish.

F. Range of Alternatives

17 The draft DMMP/EIS does not present a reasonable range of alternatives. NEPA provides that all federal agencies shall, to the fullest extent possible, "[s]tudy, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4322(2)(E); *Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1519-20 (9th Cir. 1992) ("ICL"). Furthermore, the existence of a viable but unexamined alternative renders an environmental impact statement inadequate. *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985).

18 Alternative 1, which is presented as the no-action alternative, is not truly no-action, but merely presents *status quo* management of the project area. A true no-action alternative is one in which dredging does not occur. Although the Corps states that the sediment needs to be removed from the navigation channel at the upstream end of Lower Granite Reservoir to provide for unrestricted navigational use, the Nez Perce Tribe believes that the Corps should consider other alternatives for dealing with the chronic sedimentation that occurs at this site. The DMMP/EIS does not provide an analysis that considers
19 having navigation be limited to periods of higher flows, nor limiting navigation at some periods to smaller vessels with less draft.

Moreover, all the alternatives presented in the draft DMMP/EIS are dredging alternatives. It is shortsighted for the Corps to focus on only "end of the pipe solutions" rather than the
20 sources of sediment loading. Although the DMMP/EIS states that the Corps does not have the authority to control land uses and land management practices in the vast majority of the watershed, they could contribute the money used for dredging to sponsor programs to address upland and streambank erosion problems in the upper watershed. The Nez Perce Tribe believes that the only reasonable, long-term solution is to address those problems. The Corps should therefore, include an alternative that focuses on riparian restoration and best management practices in forest and agricultural areas. The draft DMMP/EIS currently includes alternatives that require the cooperation of other local, state, and federal agencies, and so development of this new alternative could also.

21 Importantly, the draft DMMP/EIS does not consider breaching the four Lower Snake River dams in its alternatives. The Corps' recent decision not to breach was based only on issues of juvenile fish migration. There are additional economic and environmental considerations that need to be assessed. In particular, breaching Lower Granite Dam may be the only economically feasible long-term solution to the problem of sediment accumulation and potential flooding of the City of Lewiston. It is highly probable that the proposed 3-foot levee raise in the alternatives will prove inadequate within the next five

to fifteen years. A further raise in the levee would likely prove extremely expensive since it would also entail raising bridges and addressing road infrastructure requirements.

Specific Comments

1.2 Purpose and Need

The Corps states that project purpose and need is to restore the authorized depth of the navigation channel, remove sediment from port areas, provide for recreational use, and provide for wildlife habitat planting irrigation. This dredging is authorized by the River and Harbor Act of 1945 (Public Law 79-14). It is unclear from the draft DMMP/EIS
22 whether this inland navigation system/waterway can be supported without maintenance dredging. Although dredging is authorized, it is not required, and so technically the Corps does not need to dredge.

2.5.1 Alternative 1 – No Action (No Change) - Maintenance Dredging With In-Water Disposal

23 The Nez Perce Tribe strongly objects to the No Change In-Water Disposal alternative. This alternative proposes removing sediment from the navigation channel, and disposing of the dredged material at the deepwater disposal site. This is not an acceptable alternative as the removal and disposal of the sediment would cause negative impacts to water quality, the benthos, and several ESA-listed species. Environmental impacts could be widespread as several disposal sites would be required to accommodate the volume of dredged material.

2.5.3 Alternative 2 – Maintenance Dredging With In-Water Disposal to Create Fish Habitat and a 3-Foot (0.9m) Levee Raise

24 The Nez Perce Tribe is also opposed to Alternative 2. We have the same concerns about water quality as for Alternative 1. In addition, the Tribe has concerns about the creation of fish habitat as expressed in the General Comments section, as well as the proposed levee raise and disposal process as described below.

Section 2.5.2.2, Disposal Process: The draft DMMP/EIS describes in detail the process of building shallow water habitat for juvenile salmon. It does not, however, cite any references or sources for the numbers given in the structure of that habitat, nor its extent. Further, the document states that the minimum surface area for shallow water habitat is four acres, but acknowledges that average pre-impoundment habitat was larger.

Section 2.5.2.3, Levee Raise: As stated in the General Comments section, the Tribe has concerns that the proposed 3-foot levee raise will prove inadequate within the next five to fifteen years. A further raise in the levee, which would likely be prohibitively expensive, would then be required. The Tribe believes that other alternatives for flood control for the City of Lewiston must be assessed. Breaching one or more of the Lower Snake River dams would likely be a more cost effective and ecologically beneficial solution. An

O-78

economic analysis of cost of further levee raises compared to that of dam breaching and upstream flood control is needed.

2.5.2 Alternative 3 – Maintenance Dredging With Upland Disposal and a 3-Foot (0.9m) Levee Raise

25 The Nez Perce Tribe objects to Alternative 3 and using upland disposal for dredged material. Upland disposal has serious drawbacks, which the draft DMMP/EIS acknowledges. Additional dredging would be required to restore access to the proposed site, and a dewatering process would be required at the transfer station used to move the material from water to land. The effluent from this process could be highly contaminated, and could cause a turbidity plume as well. Water quality, the benthic community, and ESA-listed fish could all be impacted.

Section 2.5.3.2, Upland Disposal Site: In addition to the concerns expressed in the
26 General Comments section, the Tribe is concerned about possible contaminated material being deposited at the site. The draft DMMP/EIS states that such material would be isolated and appropriate confinement measures taken, e.g. an impervious liner would be installed to prevent leaching. There is no statement, however, regarding how would determination be made of whether dredge material is contaminated or unsuitable. A description of this process and an analysis of its cost are needed. In addition, supposedly impervious liners have a long history of leaking, which could result in the contamination of groundwater. Contaminated material could also result in air quality impacts through airborne distribution of dried particles. Bioconcentration of contaminates could occur as well.

2.5.4 Alternative 4 – Maintenance Dredging With Beneficial Use of Dredged Material and a 3-Foot (0.9m) Levee Raise

The Nez Perce Tribe does not support the Proposed Action Alternative due to concerns expressed above regarding ESA-listed fish species, fish habitat creation, possible spread of contamination from dredged material, and the long-term ineffectiveness of the levee raise. The Tribe has the following additional concerns regarding the feasibility of the proposed beneficial uses:

27 *Section 2.5.4.2, Beneficial Uses*: The beneficial uses described in the draft DMMP/EIS all require a local sponsor to contribute a share of the cost. Has any research been done into the likelihood of finding such sponsors, how many would be needed, and for what period of time? Unless the required number of sponsors exists, the plan will not be able to be implemented successfully.

Section 2.5.4.2.3, Potting Soil: There is no economic analysis given to support the feasibility of using dredged material for potting soil. How much of the dredged material would be suitable for potting soil given concerns about the presence of toxics? What are the plans for testing of dredged material to assure it is appropriate for this use? What is the economic impact of that testing?

Section 2.5.4.2.3, Riparian Habitat Restoration: If few or none of tentative sponsors actually participated, how would this alternative be affected? Since all these sponsors are tentative, this scenario could occur making this use of dredged material infeasible.

Section 2.8.8 Monitoring

28 The draft DMMP/EIS states that a detailed monitoring plan will be presented in the final plan. Once the final plan is published, it is too late for the public to comment on its adequacy or inadequacy. Monitoring is a critical component of any plan, and it is essential that the public have the opportunity to evaluate and comment on it.

Section 3.1.1 Fish

3.1.1.1 Anadromous Fish

In several cases, the draft DMMP/EIS provides contradictory information regarding anadromous fish. It states that wild Snake River spring/summer chinook salmon and adult steelhead are likely to be present in the proposed project areas during the winter in-water work window and in November at the Joso site. But it also asserts that overwintering in the proposed dredging area is probably uncommon, and therefore not a cause for concern. In addition, it states that the clamshell dredge will not entrain fish because of its design and manner of use. In Appendix F, Biological Assessment for Anadromous Fish Species, however, it says that the possibility of entrainment does exist. Such statements do not

29 provide sufficient proof that no harm will be occur as required under the Endangered Species Act. Certainly, any fish that are present will be harassed by the dredging activities in violation of the ESA.

30 The volume of relocated sediment caused by the dredging is a particular area of concern. The lower Snake River has a large sediment load that would be exacerbated by the dredging through re-suspension of sediments into the water column. Increased sediment has particularly harmful habitat impacts, and negatively affects all life cycles of fish. Sediment deposition causes an increase in cobble embeddedness, which degrades habitat quality. Sediment is also harmful to fry and juvenile fish. Fine sediment causes gill irritation and metabolic stress, and can reduce the growth rate of juveniles. Sediment can also affect fish downstream and even system-wide. Even if few threatened salmonids are present at the time of the scheduled dredging, is important that they not be harmed.

31 The draft DMMP/EIS asserts that a small portion of the total life history of these fish is spent under direct influence of the hydro system. This statement is misleading since it does not state the important fact that the time under the influence of the hydro system is critical to the continuing survival of the fish. In addition, the statement is inaccurate. There are some anadromous fish that spawn and rear under the direct influence of the hydro system, and many more that the hydro system indirectly affects.

O-79

In its recently released Biological Opinion on the Federal Hydropower System, the National Marine Fisheries Service stated that its focus for restoration of salmon will be

32 on habitat. Clearly the impacts on habitat of dredging at the scale proposed directly contradict these goals.

3.1.1.2 Resident Fish

33 With respect to bull trout, the draft DMMP/EIS acknowledges that there is the potential for fish to be displaced from the dredging area. It also asserts that any bull trout in the area would be startled and move away from the disturbance, thus preventing direct harm. However, the noise or shock wave associated with release of dredged material, as well as the sudden change in light that would cause the startle reaction has the potential to cause excess energy expenditure as well as loss of habitat. The Endangered Species Act prohibits harassment of this type. The finding that dredging and disposal operations may affect, but are not likely to adversely affect bull trout ignores the potential habitat loss and harassment described above.

3.5 Cultural Resources

The Nez Perce Tribe is concerned that the dredging will harm cultural properties. The draft DMMP/EIS acknowledges the existence of approximately 600 known archaeological sites within the project area. The changes in reservoir levels harm cultural

34 resources. Although the dredging is intended to go no deeper than the natural river bottom, it is not clear that the dredgers will know they have reached that point until they dredge up river rocks, at which point they will have already disturbed any cultural properties. In addition, cultural properties at disposal sites for dredged materials could suffer long-term impacts, especially those that are currently underwater and so difficult to identify.

35 In a November 23, 2001 letter to the Nez Perce Tribe, the Corps stated their intention to do cultural resource assessments of all Alternative 4 undertakings on a case-by-case basis. The Tribe supports this assessment process.

3.9 Water Quality/Water Resources

The Nez Perce Tribe is concerned about the water quality impacts of all the dredging

36 scenarios. Water quality effects of the dredging acknowledged in the draft DMMP/EIS include turbidity plumes, re-suspension of materials, and ammonia. Turbidity is known to be harmful to all life stages of fish. It leads to an increase in salinity, which harms freshwater biota that cannot osmoregulate even a small increase in salinity. Ammonia is toxic to aquatic organisms. Toxic compounds are also a concern.

Section 3.9.1.8, Lower Snake River Water Quality:

The most immediate and obvious water quality impairment resulting from the dredging is large turbidity plumes reaching up and down stream of the dredging sites. Dredging

36 cont. activities may potentially occur non-stop during the stated project period resulting in extended periods of increased water turbidity. Elevated turbidity reduces the amount of light penetration in the water that reduces photosyntheals and the production of dissolved oxygen. Suspended sediments that escape during the removal process will resettle, covering the stream bottom, smothering fish eggs, and benthic macroinvertebrates both locally and downstream of the dredge and disposal sites. Suspended materials can clog fish gills, reducing disease resistance, and affecting egg and larval development. The draft DMMP/EIS states that fish only had damaged gills when extreme quantities of sediment were suspended in test waters. What are those levels? How do they compare to projected increased turbidity from dredging? Until these questions are answered, no accurate assessment of the impacts of increased turbidity from dredging can be made.

Increased turbidity is also a concern since as suspended particles absorb heat resulting in increased water temperatures. Elevated temperatures can lead to a reduction in oxygen content of water which in turns impacts rates of photosynthesis, metabolic rates of aquatic organisms (e.g., ESA-listed salmonids), and the sensitivity of aquatic organisms to environmental stresses such as disease, parasites, and toxic wastes.

Changes in oxygen concentrations at the sediment-water interface can also affect pH and the redox state of sediment associated contaminates or nutrients. A scientific analysis of
37 potential sediment nutrient and chemical contaminate mobilization due to changes in oxygen concentration is not provided in the draft DMMP/EIS. Specifically, the short and long-term site-specific impacts to phytoplankton seasonal succession patterns and production should be discussed. In addition, the draft DMMP/EIS should include an analysis of the mobilization potential of sediment-associated contaminates, the concentration of these contaminates in the in-water disposal sites, the size of the turbidity plume, and the potential for bioaccumulation of contaminates through food web interactions.

O-80

38 As the draft DMMP/EIS states, the Snake River sediments are very rich in nutrients. The proposed dredging could cause the release of ammonia (NH_3), which is toxic to aquatic life. Both nitrate and ortho-phosphate could also be released. It is known that algae booms are mostly likely to occur when nitrogen and phosphorus both increase Despite the statement in draft DMMP/EIS that small releases of phosphorus should not pose a problem, in a situation where nitrogen compounds are elevated, a very small amount of phosphorus can cause algae blooms to occur. This is particularly true in waters, such as the Lower Snake River, that are already classified as upper mesotrophic to eutrophic. Even though the proposed work window is in the winter, harmful algal blooms can still occur. There is much evidence of algae growth during winter, and even under ice. The proposed on-site testing for these compounds is not adequate for avoiding impairment of water quality and possible harmful impacts to aquatic organism. Once the compounds are released, the damage is done. It is possible at that point, however, not to do further damage.

39 The existence of toxic substances in sediments is a concern. The draft DMMP/EIS states that chlorinated furans and dioxin congeners were detected in sediment samples collected

39 cont. from the project area in 1991, 1996, and 1998. Sediment data collected in 2000 has revealed the presence of chlorine dioxin congeners at several of the proposed project sites. Given the past variability in the detection of these chemicals it is unclear whether the 2000 sediment contaminate data is truly representative of what will be found throughout future dredging activities. Furthermore, the draft DMMP/EIS gives assurance, without providing the supporting science and data, that contaminate levels are below those that would eliminate an in-stream disposal option.

40 Another concern of the Nez Perce Tribe is the reliability of the toxic substance data set for assessing water quality and public health impacts. The draft DMMP/EIS states that recent sampling data is not available for areas where dredging is proposed in the lower Snake River. Complete baseline sampling of toxic substances must be performed in any proposed dredging area before dredging occurs. The statements in the document that "additional monitoring for metals would be included in future sampling events and prior to dredging a specific area" and that "some additional water quality analysis for organic chemicals may be recommended by the Testing Framework as it develops" are not an adequate approaches to ensure that water quality is appropriately assessed.

The Water Quality Standards for Surface Waters of the State of Washington specifies that for Class A Waters, the occurrence of toxic concentrations "shall be below those which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department" (WAC
41 173-201A). The Corps has not provided the supporting scientific evidence that the presence of sediment-associated contaminates will be consistent with the State of Washington Surface Water Quality Standards. An ecosystem level analysis of the potential exposure to toxic contaminate is required in order to provided a reasonable assurances that public health and aquatic wildlife will not be negatively impacted through exposure to these contaminates during and after dredging operations.

The Lower Snake River is included on the State of Washington's 1998 303(d) list as a water quality limited stream segment for temperature, dissolved oxygen and total dissolved gas. As such, the Lower Snake River does not provide for the protection of cold water fish as required by the Clean Water Act, 33 U.S.C. § 1251 (a)(2). Clearly, further degradation of this waterbody should not occur from human caused activities.

Sections 3.9.1.9 and 3.9.1.10, Columbia River and Snake River Water Quality:

The Nez Perce Tribe has the same concerns regarding nutrients, and toxic substances as for the Lower Snake River.

Section 3.9.2, Sediment Quality:

Sediment in the Snake River is contaminated with several compounds that are highly toxic to aquatic life. For example, the draft DMMP/EIS states that dioxin TEQ exceeded minimum sediment quality criteria. DDT, which is highly toxic to fish and invertebrates,

41 cont. is another chemical of concern. Dredging has a high probability of releasing these substances into the water column. In addition, the data cited for metals are from a 1973 study. More current data is essential for any decision regarding the impacts of the dredging on water quality.

Analyses in Appendix H are based on data from 1994-1997, but EPA has since revised the criteria for those chemicals and, as stated in the draft DMMP/EIS, testing must be
42 repeated. The document says that the Corps plans to evaluate the issue further and determine what, if any, additional testing and analysis may be needed. It is clear that more testing is needed. Without an accurate knowledge of the concentrations of these lethal chemicals, the impact of the dredging cannot be accurately assessed.

Despite the acknowledgements of the presence of harmful substances in sediments, the
43 draft DMMP/EIS states that, "Dredging the navigation channel downstream of the dams should have little effect on water quality since the material to be removed is expected to be river cobbles with some larger rocks with very small amount of fines." This conclusion cannot be accepted.

3.10 Hazardous, Toxic, and Radioactive Waste (HTRW)

44 The Corps does not adequately address health impacts from potential exposure to contaminates from the long-term direct, indirect, and cumulative impacts related to the proposed dredging in the draft DMMP/EIS. Consideration of public health is one of the primary reasons for the enactment of NEPA (115 Cong. Rec. 19,009 (1969). Potential public health issues associated with the displacement and movement of contaminated sediments (most notably dioxin contaminates), are of particular concern for the Nez Perce Tribe.

O-81

One of the dredging sites is located less than two miles downstream of the Potlatch effluent discharge pipe. Effluent discharge from this facility contains organochlorines. Dioxins are a group of these structurally related chlorinated organic compounds consisting of dibenzo-p-dioxins and chlorinated dibenzofurans. The 2,3,7,8-TCCD form of dioxin is extremely toxic and a known endocrine disrupter. In February 1997, The World Health Organization upgraded dioxin from a "probable" to a "known human carcinogen." The Environmental Protection Agency (EPA) has stated that individuals who are exposed to any amount of dioxin are at an increased risk for cancer (EPA 1997). The new discharge permit for the Potlatch pulp and paper mill will continue to allow organochlorines to enter the Clearwater River.

Dioxins are found in soil and sediments that serve as environmental reservoirs. These chemical compounds can be incorporated into fish tissue via aquatic food web interactions. In fact, the presence of dioxins/furans in fish has influenced the issuance of 59 fish consumption advisories by 19 states as of December 1998. People exposed to higher levels of dioxins include those groups, such as the Nez Perce Tribe, who consume foods (e.g., fish), containing high dioxin concentrations. In an earlier EPA funded study, the Columbia River Inter-Tribal Fish Commission determined that the mean rate of fish

consumption for Columbia River Basin Tribal members was approximately ten times higher than that of the non-Tribal community (CRITFC 1994). This inherent reliance on the fishery resource makes Tribal members particularly vulnerable to dioxin exposure.

44 cont. The absence of 2,3,7,8 TCDD, the most toxic form of dioxin, in the Corps sediment samples is insufficient reason to conclude a non-significant human health risk from organochlorines. Less toxic congeners were present and although these congeners were found in small amounts, exposures to these compounds is associated with many adverse health effects in laboratory animals. Epidemiological studies have suggested that dioxins may cause immunological suppression, respiratory, cardiovascular and liver effects in humans (EPA 1977). Simply stating that these contaminates occurred in "small amounts" is insufficient evidence to conclude a finding of no significant impact to Tribal and non-Tribal community health.

The Corps' trust responsibility to the Nez Perce Tribe requires that the Corps protect the treaty-reserved fishery resource and Tribal health. As part of this responsibility, the Corps must carefully reevaluate their proposed action to dredge the navigation channel and the impacts to Tribal health and well-being. This evaluation must include a determination of whether past findings of chlorinated furans and dioxin congeners in sediment samples taken from project area in 1991, 1996, 1998 present a human health risk. In addition, this evaluation should include a human risk assessment analysis that considers past, present, and future exposures to all toxic forms of dioxins.

4.1 Aquatic Resources

4.1.1 Dredged Material Removal:

The Nez Perce Tribe has several concerns about the process of removing dredged material. The draft DMMP/EIS states that if there is a 5-NTU increase over background turbidity at a point 300 feet downstream, immediate actions will be taken to reduce the
45 plume. How did the Corps decide on the 5-NTU over background number? Is there any scientific support for that number? Even though the draft DMMP/EIS asserts that the effects are local and temporary, a plume of suspended solids reaching 1000 feet downstream can have a detrimental effect on aquatic life, particularly any fish that may be in the area. If dredging spans a large area, the effects will be even greater.
46 Additionally, even "short-term" impacts can have long lasting effects on aquatic life. The draft DMMP/EIS also fails to define what is meant by "short-term," and appears to be guessing at how long it would take to accomplish the reduction.

The Corps lacks an adequate emergency response plan to address situations where turbidity exceeds the state of Washington Water Quality Standards. The EA states that the contractor will be required to contact the Corps within eight hours should turbidity exceed allowable levels and temporarily stop dredging operations. However, the cessation of dredging cannot mitigate for impaired water quality. Detailed, procedural
47 steps for addressing elevated turbidity and the associated mitigation measures should be included in the draft DMMP/EIS. In addition, the short and long-term impacts resulting

from these incidents on the plant, benthic, and fish community should be more thoroughly described.

The draft DMMP/EIS asserts that there would be ecological benefit from dredging to the original river channel through improving the integrity of the river bottom, and so benefiting white sturgeon and benthic macroinvertebrates. The draft DMMP/EIS cites several studies (in Section 4.1.7) that show that benthic macroinvertebrates recolonize
48 rapidly. These references, however, are to the work of a single author whose research is funded by the Corps. This is not adequate scientific evidence. Also, there are no references to research showing that dredging in actually benefits benthic macroinvertebrates or white sturgeon.

49 The Tribe questions the need for hydraulic dredging. Can it be done without agitating the sediments, as stated in the draft DMMP/EIS? We also question the use of slurry for wildlife planting areas or to restore eroded streambanks for the reasons stated above in the General Comments section.

4.1.7 Critical Habitat Considerations:

See comments in the General Comments section.

4.6 Socioeconomics

O-82

See 16 The Nez Perce Tribe strongly disagrees with the statement in the draft DMMP/EIS that none of the alternatives are anticipated to disproportionately affect low-income or minority populations in the area. Any adverse impact on fish and fish habitat has a disproportional impact on the Nez Perce due to their reliance on fish for food and the importance of fish to their culture and spirituality. As stated above, in an EPA funded study, the Columbia River Inter-Tribal Fish Commission determined that the mean rate of fish consumption for Columbia River Basin Tribal members was approximately ten times higher than that of the non-Tribal community (CRITFC 1994).

4.14 Cumulative Effects

50 The cumulative effects analysis in the draft DMMP/EIS is inadequate and does not meet the requirements in NEPA. In doing a cumulative effects analysis, the Corps must consider all significant direct, indirect, and cumulative impacts of the proposed action. 40 C.F.R. §1508.25. A cumulative environmental impact is the sum total of all incremental impacts of the proposed action in consideration of past, present, and future federal or non-federal actions. 40 C.F.R. §1508.7. In violation of NEPA, the draft DMMP/EIS fails to disclose the current and likely cumulative effects resulting from the synergistic disturbance caused by the Snake and Columbia River dams, land use activities upstream of the project area, barge traffic, past and future dredging activities, and levee modifications. In particular, it does not consider the impacts of the Snake and Columbia River dams at all, except to say that future drawdown scenarios are unknown, and so

cannot be considered. The past and current impacts of those dams are ignored. Upstream land use activities as well as current and future barge traffic are not mentioned.

51 The cumulative effects on public health from exposure to chemical contaminates is also missing. Specifically, this cumulative analysis should examine the potential for concentrating these sediment-associated contaminates over time in the newly created shallow water habitat, the localized and down stream water quality impacts resulting from the mobilization of these contaminates due to embankment failure, the potential for bioaccumulation of contaminates in fish tissue, and exposure to contaminates from recreational activities. The cumulative impacts of contaminants allowed by the current and new Potlatch permits must also be included in the analysis.

52 Additionally, there is no mention of the cumulative effects on river morphology, both up and downstream of the Project Area and disposal sites, from repeated major disturbance caused by dredging and in-water disposal. An additional important concern is the decrease in channel stability caused by dredging through disturbance of hydraulic controls.

53 Another concern that is not addressed is that the ongoing nature of the dredging may prevent the establishment of spawning and rearing use of the Project Area. Although the draft DMMP/EIS states that many impacts studied are local and short-term, it does not assess the recurring nature of the impacts over a period of years. This is especially important since the Project Area is designated critical habitat for rearing of salmonid species.

Since the actions proposed in the draft DMMP/EIS are designed to establish a procedure for the disposal of dredged material over the next twenty years, it is essential for the cumulative effects analysis to be thorough and complete.

54 The Nez Perce Tribe may have other comments and concerns regarding the draft DMMP/EIS, but due to the brief comment period and the fact that the period spanned the Christmas and New Year's holidays, there was insufficient time to thoroughly assess the extensive documents. Despite repeated requests by the Nez Perce Tribe and others for an extended comment period, the Corps decided only to grant a short extension for final comments. Draft comments were still due on the original comment deadline.

If you have any questions or concerns regarding this letter, please feel free to contact Barbara Inyan in our Water Resources Division (208-843-7368). Thank you.

Sincerely,

Samuel N. Penney

Samuel N. Penney
Chairman

Organization
Nez Perce Tribal Executive Committee
Comment 1
The Nez Perce Tribe has concluded that implementation of any of the alternatives presented in the draft DMMP/EIS, including the preferred alternative, would likely seriously degrade the fishing resource, and so cause irreparable harm to fish species protected under the Endangered Species Act (ESA).
Response
The Corps realizes that dredging and disposal of material in the lower Snake River and McNary Reservoir may have negative impacts to some ESA-listed fish in the project areas (DMMP - Appendix F). However in the NMFS Biological Opinion, it is stated, "The NMFS has determined that the effects of the proposed actions will not jeopardize the continued existence of endangered SR sockeye, threatened SRF chinook, threatened SRSS chinook, threatened SRB steelhead, endangered UCRS chinook, endangered UCR steelhead, or threatened MCR steelhead or result in the adverse modification or destruction of their Critical Habitat. The determination of no jeopardy is based upon the current status of the species, the environmental baseline for the action area, and the effects of the proposed actions."

Organization
Nez Perce Tribal Executive Committee
Comment 2
Such Action (implementation of any of the alternatives presented in the draft DMMP/EIS) would adversely impact federally and judicially confirmed treaty rights of the Nez Perce Tribe.
Response
The Corps' recommended plan includes provisions to minimize adverse effects on ESA-listed fish. In addition, the National Marine Fisheries Service (NMFS) has determined that by incorporating conservation measures and following the Reasonable and Prudent Measures (RPM's) provided by NMFS in their Biological Opinion for the DMMP, the Corps will not jeopardize ESA-listed fish with its dredging and dredged material disposal operation.

Organization
Nez Perce Tribal Executive Committee
Comment 3
The presence or absence of the species at the time of the alteration is not a factor.
Response
The primary dredging areas are in the main channel near the confluence of the Snake and Clearwater rivers. Although most endangered or threatened salmonids use this area primarily as a migratory corridor, some fish including fall chinook and steelhead may rear in this area year round. However, because most of the proposed dredging area is in the main channel of the river, fewer fish use this area as rearing habitat, as most habitat preferences are oriented along shorelines. Because most shoreline areas are not intended for dredging, but are intended for habitat creation by disposal, the DMMP/EIS indicates that beneficial use of dredged material will have a net benefit on critical habitat for fall chinook. The National Marine Fisheries Service indicates, "The NMFS has determined that the effects of the proposed actions will not jeopardize the continued existence of endangered SR sockeye, threatened SRF chinook, threatened SRSS chinook, threatened SRB steelhead, endangered UCRS chinook, endangered UCR steelhead, or threatened MCR steelhead or result in the adverse modification or destruction of their Critical

Habitat. The determination of no jeopardy is based upon the current status of the species, the environmental baseline for the action area, and the effects of the proposed actions."

Organization
Nez Perce Tribal Executive Committee
Comment 4
The draft DMMP/EIS does not give any information on critical habitat for fall chinook or bull trout. Impacts to critical habitat for these species need to be provided.
Response
Critical habitat is discussed in Appendix K of the DMMP/EIS. The primary dredging areas are in the main channel near the confluence of the Snake and Clearwater rivers. Although most endangered or threatened salmonids use this area primarily as a migratory corridor, some fish including fall chinook and steelhead may rear in this area year round. However, because most of the proposed dredging area is in the main channel of the river, fewer fish use this area as rearing habitat, as most habitat preferences are oriented along shorelines. Because most shoreline areas are not intended for dredging, but are intended for habitat creation by disposal, the DMMP/EIS indicates that proposed beneficial use of dredged material will have a net benefit on critical habitat for fall chinook. The National Marine Fisheries Service indicates, "The NMFS has determined that the effects of the proposed actions will not jeopardize the continued existence of endangered SR sockeye, threatened SRF chinook, threatened SRSS chinook, threatened SRB steelhead, endangered UCRS chinook, endangered UCR steelhead, or threatened MCR steelhead or result in the adverse modification or destruction of their Critical Habitat. The determination of no jeopardy is based upon the current status of the species, the environmental baseline for the action area, and the effects of the proposed actions." Similarly, the US Fish and Wildlife Service has concurred that the proposed actions may affect, but is not likely to adversely affect bull trout.

Also see response to Nez Perce Tribal Executive Committee Comment 3.

Organization
Nez Perce Tribal Executive Committee
Comment 5
[T]he draft DMMP/EIS states that since dredging will only occur in the main navigation channels that critical habitat areas near shore will not be impacted. Even if those areas will not be directly impacted, they will be affected since the river is a system, and it is impossible to impact one area without also impacting nearby areas. Thus, the adverse impacts would be indirect ones, which are not allowed under the ESA.
Response
The DMMP/EIS acknowledges the potential impacts and benefits – direct, indirect, and cumulative – of dredging and dredged material management activities. NMFS has reviewed the likely impacts to ESA-listed fish species, and determined that the proposed activities would not jeopardize listed fish species.

Organization
Nez Perce Tribal Executive Committee
Comment 6
The stated mitigation approach is to dredge when these species are less likely to be present, and to use clamshell dredges, which are unlikely to entrain fish. Both these approaches are inadequate to protect fish.
Response
Fall chinook typically have an ocean type rearing life history and typically outmigrate seaward during the summer as subyearlings (Tiffan et al, 2001). According to Williams and Bjornn 1998, "A small proportion of hatchery and natural subyearling fall chinook salmon residualized and migrated early in spring 1997; however, as with fish released in 1995, the number that overwintered and migrated seaward as yearlings in spring was small and did not effect survival estimates." This indicates that that only a small proportion of fall chinook may over winter every year. Dredging with a clamshell during the two specified periods, and when fish are expected to be at low abundances, are acceptable methods for reducing the possible entrainment of fish. Furthermore, clamshell dredging allows fish to escape entrainment. Although the Corps understands that this may still have impacts on adult Steelhead and rearing juvenile salmonids, the NMFS Biological Opinion indicates that the dredging and disposal actions are not jeopardizing the continued existence of the ESA listed species.

Organization
Nez Perce Tribal Executive Committee
Comment 7
Possible impacts to Tucannon River bull trout must be included in the draft DMMP/EIS.
Response
The bull trout in the upper Tucannon River and its tributaries (Cummings, Panjab, Sheep, and Bear Creeks) and Pataha Creek are a distinct stock. Most major tributaries have resident and fluvial life history forms. Adfluvial fish are also present in the mainstem upper Tucannon River as documented with one radio-tagged fish monitored in 1993. Within a few days, it traveled from above the Tucannon hatchery to the Starbuck area where the signal was lost. It appeared to be heading for the Snake River (WDFW 1998). Thus, individuals may migrate to the Snake River. As noted in the DMMP/EIS (Section 3.1.1.2) limited numbers of bull trout have been counted. Since the Tucannon River is the only major tributary in the lower Snake River that is a source of bull trout/Dolly Varden, it can be assumed that bull trout/Dolly Varden in the project area are Tucannon River fish. The general discussion relating to impacts to fish species presented in Section 4.1 of the DMMP/EIS apply to Tucannon River bull trout.

Organization
Nez Perce Tribal Executive Committee
Comment 8
The draft DMMP/EIS does not address possible harm to fall chinook salmon, which have been observed overwintering in the project area. Sub-yearling fall chinook would be particularly vulnerable to impacts from dredging.
Response
These issues surrounding fall chinook are addressed in the DMMP in Appendix F, pages F41-45 and in Appendix K, pages K3-7. The Corps outlined fall chinook behavior and life stages in the project area and determined that proposed activities would likely adversely affect fall chinook

salmon by dredging. However, the Corps would be creating a long-term benefit to these salmonids by creating rearing habitat. The NMFS agreed in their Biological Opinion that proposed activities will not be jeopardizing the existence of any of the endangered species in the dredging area.

Organization
Nez Perce Tribal Executive Committee
Comment 9
Despite the statement in the draft DMMP/EIS that it is improbable that dredged material would even be moderately contaminated, the data on which that conclusion is based is data from 1997 and 1998. It is highly likely that more recent data would show different results, especially in light of effluent from the Potlatch pulp and paper mill and agricultural runoff.
Response
The findings presented in the DMMP/EIS are based on reviews of available sediment data. Analysis prior to dredging will include chemical analysis to identify contaminants if they exist within the sediments to be dredged. The collection and analysis of sediment samples will be done in accordance with the dredged material evaluation framework and a specific sampling and analysis plan that is designed to provide a high probability that significant amounts of chemicals of concern will be identified prior to the start of dredging operations. A monitoring plan has been developed, and is included with the Final DMMP/EIS. Monitoring during dredging will assess whether unacceptable amounts of sediment movement may occur during dredging operations and require that the work be stopped and/or modified to provide additional controls or limit the extent of sediment plumes in the river. While the Corps' intent is to test the sediment and avoid reintroduction of any chemicals of concern into the water column, monitoring will be used to limit the extent of impacts if an unknown "hot spot" is encountered during dredging. The Corps sampled sediments in the areas of proposed dredging in 2000 as well, and review of sampling results indicates that substantial impacts resulting from contaminated sediments remain unlikely.

Organization
Nez Perce Tribal Executive Committee
Comment 10
Furthermore, the draft DMMP/EIS does not give adequate information on how the usability of dredged material will be determined. It states that whenever a load of dredged material visually looks like it may be contaminated, a test will be done. A visual analysis, though, is far from being an adequate indication of the presence of contamination. Also, the draft DMMP/EIS does not state what analyses would be done on the material, nor the percentage of the dredged material that would be analyzed. Importantly, how would the cost of these analyses impact the feasibility of the proposed alternatives?
Response
In accordance with the dredged material evaluation framework, a sampling and analysis plan will be developed for each site that identifies the number of samples to be taken, sample locations, and the constituents that will be included in the laboratory analysis. The number of samples and the locations where samples will be taken will be designed to ensure a high probability that unacceptable materials will be identified prior to the start of dredging. The types of analysis to be run on the collected samples will be based on the results of historical sampling, and known discharges to the river from industrial, agricultural, municipal and other sources. Visual analysis would only be used to identify an oily sheen on dredged material. The cost of sampling and

analysis would be small in comparison to the overall cost of dredging.

Also see response to comment 9 above.

Organization
Nez Perce Tribal Executive Committee
Comment 11
The mitigation proposed in the draft DMMP/EIS (in Section 4.2.5) of purchasing new land would not truly compensate for the loss of habitat. Wildlife would still be displaced, and there is no guarantee that the habitat in the purchased land would be as suitable.
Response
While there would be no "guarantee" that replacement HMU lands would be "as suitable" as those lands that would be utilized, the Corps would take steps to ensure that mitigation sites provide habitat values that would be lost as a result of use of the Joso site for upland disposal. Specifically, as noted in the DMMP/EIS, the Corps would coordinate with the WDFW and USFWS regarding mitigation site selection and restoration. A re-vegetation planting and monitoring plan will be prepared for review and comment. This plan would be the basis for site restoration.

At this time, no native upland vegetative communities are targeted for destruction due to proposed dredged material disposal. Upland disposal, if employed, would involve placement of dredged material in the abandoned gravel quarry at the Joso site. Though it would result in temporary impacts to upland wildlife, this activity would actually improve the existing upland habitat by filling and re-vegetating the quarry area with species native to the area. This would result in a long-term improvement of habitat at the Joso site.

Organization
Nez Perce Tribal Executive Committee
Comment 12
There is a notable lack of references to research confirming that the proposed construction of that habitat will be stable and lasting.... The Lower Snake River, which has several ESA-listed fish species, is not an appropriate place to experiment on construction of fish habitat.
Response
The NMFS requires in its Biological Opinion for the DMMP that additional monitoring of the habitat will occur, which was anticipated by the Corps (Appendix F, FA-10). These studies include analyzing the disposal site to ensure its physical and biological integrity (See Appendix M). Because the proposed areas are well within the reservoir, the physical integrity of them is thought to be more stable and less susceptible to erosion from high flows. Regarding the comment that the lower Snake River is no place for experiments on development of fish habitat, experimental fish habitat development began in the mid-1980s for in-water disposal at Centennial Island, and has demonstrated that in-water disposal is a viable method for creating salmonid habitat in the reservoir.

O-85

Organization
Nez Perce Tribal Executive Committee
Comment 13
The Corps has not complied with its own policy guidance on tribal trust and consultation in the preparation of the draft DMMP/EIS.
Response
Section 6.4.3 of the DMMP/EIS the Corps provides the current status of Government-to-Government consultation with the affected tribes. The Draft DMMP/EIS stated that consultation has been initiated, but does not state or imply that consultation has been completed. The Corps is working with the tribes to set up Government-to-Government meetings to facilitate completion of consultation with involved tribes prior to signing a Record of Decision.

Organization
Nez Perce Tribal Executive Committee
Comment 14
This time limitation (short comment period and only 11 day extension) does not meet the spirit or letter of tribal consultation
Response
The time limitation to respond to the Draft DMMP/EIS was set within the requirements of NEPA. The review of the NEPA document is not intended to constitute Government-to-Government consultation with the Tribe. The Corps is committed to meeting tribal consultation requirements in addition to meeting NEPA requirements.

Organization
Nez Perce Tribal Executive Committee
Comment 15
The group, however, has no members from the Nez Perce or other Indian tribes. The Tribes are among those groups the draft DMMP/EIS indicates will be asked to participate only on an as needed basis.
Response
Representatives from the cultural resource and water quality technical staffs of the Nez Perce Tribe, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes and Bands of the Yakama Indian Nation, Confederated Tribes of the Colville Reservation, and the Wanapum Band have been invited to every meeting of the Local Sediment Management Group (LSMG). Technical staff members from most of the Tribes, including several from the Nez Perce Tribe, have attended these meetings.

Section 1.8 has been revised to show an expanded list of participants in the LSMG including Tribes and non-agency groups such as ports and transportation interests. The Nez Perce Tribe has been invited to join the LSMG as a regular participant.

Organization
Nez Perce Tribal Executive Committee
Comment 16
Any impacts on salmon, which all the alternatives have, have a disproportionate impact on the

Nez Perce Tribe. The evaluation must also consider human health impacts, and the increased impact on tribal members who consume greater quantities of fish.

Response

The Corps' environmental justice analysis considered the effects of the alternatives on low-income and minority communities that are potentially affected. The DMMP/DEIS concluded that none of the alternatives considered in detail would cause a disproportionately high and adverse effect on low-income or minority populations in the area. The four alternatives considered in detail, including the no action alternative, would have indirect, minor, short-term effects on aquatic species. Two of the four alternatives, including the preferred alternative, would provide potential beneficial effects to aquatic resources through the implementation of beneficial uses of dredged material, such as creation of woody riparian habitat and/or shallow water fish habitat.

Given the fact that no substantial impacts were anticipated, and the dispersed nature of most of the impacts that would be likely to occur, the Corps concluded in the DMMP/EIS that impacts would not be likely to be high, adverse, nor fall disproportionately on any demographic group in the project area. The discussion of environmental justice analysis is presented in greater detail in Section 4.6 of the Final DMMP/EIS.

The Corps acknowledges the importance of the Columbia/Snake River fishery to Native American communities both as a food source and as a spiritual and cultural resource. However, based on the analysis of the environmental impacts of the DMMP alternatives and consultations with resource agencies, significant adverse effects on aquatic resources, including salmon and steelhead, are not anticipated to result from the proposed action. Further, mitigation measures and efforts to maximize beneficial uses of dredged material proposed in the EIS are anticipated to minimize adverse effects to aquatic resources and potentially create new habitat for salmonid species. NMFS' Biological Opinion states that the proposed action will not cause jeopardy for endangered fish stocks in the middle Columbia and lower Snake Rivers.

Organization
Nez Perce Tribal Executive Committee
Comment 17
The draft DMMP/EIS does not present a reasonable range of alternatives.
Response
The range of alternatives meets the project purpose and need. Non-dredging and reduced dredging alternatives were considered. The Corps was unable to identify any non-dredging alternatives that would preclude the need for dredging. Reducing sediment generated by land use practices was considered, but would not eliminate the need for dredging. Although the Corps has no authority to change land use practices on non-Corps property, the Corps plans to use the Local Sediment Management Group to pursue possible modifications to land use practices.

Organization
Nez Perce Tribal Executive Committee
Comment 18
Alternative 1, which is presented as the noaction alternative, is not truly noaction, but merely presents status quo management of the project area. A true noaction alternative is one in which dredging does not occur.

O-86

Response

When preparing National Environmental Policy Act (NEPA) documents, the "No Action" alternative can also be called the "No Change" alternative, as in no change in the current way of doing business. For the DMMP/EIS, "no action" was defined as no change in the way the Corps is currently maintaining the navigation channel, port facilities, boat basins, or irrigation intakes. This interpretation is described in the Council on Environmental Quality publication "NEPA's Forty Most Asked Questions." See response to Save our Wild Salmon's comment 6.

Organization
Nez Perce Tribal Executive Committee
Comment 19
The DMMP/EIS does not provide an analysis that considers having navigation be limited to periods of higher flows, nor limiting navigation at some periods to smaller vessels with less draft.
Response
The Columbia/Snake waterway is managed to provide the authorized navigation channel year-round except for the annual lock maintenance outage in March. See response to Save our Wild Salmon comment 29 regarding options including limitations on navigation.

Organization
Nez Perce Tribal Executive Committee
Comment 20
[A]ll the alternatives presented in the draft DMMP/EIS are dredging alternatives. It is shortsighted for the Corps to focus on only "end of the pipe solutions" rather than the sources of sediment loading. Although the DMMP/EIS states that the Corps does not have the authority to control land uses and land management practices in the vast majority of the watershed, they could contribute the money used for dredging to sponsor programs to address upland and streambank erosion problems in the upper watershed. The Corps should, therefore, include an alternative that focuses on riparian restoration and best management practices in forest and agricultural areas.
Response
The Corps expends funds only as authorized by Congress. Although the Corps has no authority to change land use practices on non-Corps property, the Corps plans to use the Local Sediment Management Group to pursue possible modifications to land use practices. Section 2.5.4 has been revised to include a new Corps initiative as a beneficial use. This initiative is the Woody Riparian Program, which is part of the Lower Snake River Fish and Wildlife Compensation Plan (LSRFWCP). This initiative allows the Corps to develop woody riparian vegetation on the Corps' lower Snake River project lands and on any lands purchased by the Corps as part of the LSRFWCP. As part of this initiative, the Corps is proposing to use dredged material to create planting benches and perform shoreline restoration to create more riparian habitat along the lower Snake River. As described in Appendix N, the Corps is proposing to use dredged material to create a riparian planting bench at the Chief Timothy Habitat Management Unit in the winter of 2002-2003.

Organization
Nez Perce Tribal Executive Committee
Comment 21
Importantly, the draft DMMP/EIS does not consider breaching the four Lower Snake River dams in its alternatives. The Corps' recent decision not to breach was based only on issues of juvenile fish migration. There are additional economic and environmental considerations that need to be assessed. In particular, breaching Lower Granite Dam may be the only economically feasible long-term solution to the problem of sediment accumulation and potential flooding of the City of Lewiston. It is highly probable that the proposed 3-foot levee raise in the alternatives will prove inadequate within the next five to fifteen years.
Response
Breaching any of the dams would not meet the purpose of maintaining the authorized navigation channel within the five reservoirs. Therefore, dam breaching was not considered as an alternative. However, this does not mean that possible dam breaching was not considered in the preparation of the DMMP/EIS. Section 1.6 of the DMMP/EIS addresses the relationship of the DMMP/EIS to the Lower Snake River Juvenile Salmon Migration Feasibility Study (Feasibility Study). The Feasibility Study analyzed the impacts of breaching the four lower Snake River dams as one of the alternatives. Therefore, the DMMP/EIS did not repeat this analysis. However, the preferred alternative in the Feasibility Study is System Improvements (Adaptive Migration), which includes modifying the dams, optimizing voluntary spill, and implementing operational modifications for fish transportation. Even though this alternative does not include dam breaching, the 2000 National Marine Fisheries Service (NMFS) Biological Opinion calls for major progress reports in 2003, 2005, and 2008. The 2008 report must include a determination of whether or not to pursue dam breaching. If the decision is made that dam breaching is necessary for the recovery of listed salmon stocks, the Corps will seek congressional authorization for breaching. Until such a decision is made and Congress authorizes dam breaching, the Corps has the responsibility to maintain the navigation in the lower Snake River as authorized by Congress.

Based on the Flood Damage Assessment model, raising parts of the Lewiston levees by up to 3 feet, coupled with navigation channel maintenance dredging as proposed, would provide adequate flow conveyance at Lewiston through 2074. It is unlikely the Corps would need to consider raising the levees again until then.

Organization
Nez Perce Tribal Executive Committee
Comment 22
It is unclear from the draft DMMP/EIS whether this inland navigation system/waterway can be supported without maintenance dredging. Although dredging is authorized, it is not required, and so technically the Corps does not need to dredge.
Response
The Corps was unable to identify any alternative that precluded the need for at least some dredging to maintain the navigation channel. Because the Corps has the responsibility to maintain the navigation channel, some dredging will likely be required.

Organization
Nez Perce Tribal Executive Committee
Comment 23
The Nez Perce Tribe strongly objects to the No Change In-Water Disposal alternative.
Response
Your comment is noted.

Organization
Nez Perce Tribal Executive Committee
Comment 24
The Nez Perce Tribe is also opposed to Alternative 2. We have the same concerns about water quality as for Alternative 1. In addition, the Tribe has concerns about the creation of fish habitat as expressed in the General Comments section, as well as the proposed levee raise and disposal process as described below.
Response
The proposed disposal process is based on research conducted by Dr. David Bennett of the University of Idaho (see response to Save our Wild Salmon's Comment 19 for description of study design). His work, along with that of several other researchers is referenced in Section 2.2.4.1 and throughout Section 4.1. Section 4.1 discusses the impacts of all of the alternatives on aquatic resources. Additional information about the effects of the proposed plan on aquatic resources is presented in Appendix K, Aquatic Resources, and Appendix F, Endangered Species Act Compliance, for anadromous fish species.

Organization
Nez Perce Tribal Executive Committee
Comment 25
The Nez Perce Tribe objects to Alternative 3 and using upland disposal for dredged material.
Response
Your comment is noted.

Organization
Nez Perce Tribal Executive Committee
Comment 26
The Tribe is concerned about possible contaminated material being deposited at the site. There is no statement, however, regarding how a determination would be made of whether dredge material is contaminated or unsuitable. A description of this process and an analysis of its cost are needed.
Response
See response to Save our Wild Salmon's comment 16. Appendix J to the DMMP/EIS, Dredged Material Evaluation Framework, discusses the methodology for determining the suitability of material for in water disposal. If the results of testing identify contaminants that could be harmful to the river ecosystem, the Corps will initiate appropriate steps to control the spread of contaminated sediments during dredging or avoid dredging in the locations where contaminated sediments have been identified. Sediments that are contaminated will be disposed of at an approved upland disposal site.

The costs attributed to each of the alternatives include costs associated with disposal of a portion of the dredged volume, assumed to be contaminated sediments, at an upland site.

Organization
Nez Perce Tribal Executive Committee
Comment 27
Section 2.5.4.2, Beneficial Uses: The beneficial uses described in the draft DMMP/EIS all require a local sponsor to contribute a share of the cost. Has any research been done into the likelihood of finding such sponsors, how many would be needed, and for what period of time? Unless the required number of sponsors exists, the plan will not be able to be implemented successfully... Section 2.5.4.2.3 Potting Soil: There is no economic analysis given to support the feasibility of using dredged material for potting soil. How much of the dredged material would be suitable for potting soil given concerns about the presence of toxics? What are the plans for testing of dredged material to assure it is appropriate for this use? What is the economic impact of that testing?... Section 2.5.4.2.3, Riparian Habitat Restoration: If few or none of the tentative sponsors actually participated, how would this alternative be affected? Since all these sponsors are tentative, this scenario could occur making this use of dredged material infeasible.
Response
The beneficial uses described in the DMMP/EIS are examples of potential beneficial uses. Several of these were suggested by other agencies or by the ports. The agencies and the ports were aware of the cost sharing requirements for implementing these uses. Sediment sampling data would be made available to the potential sponsor to ensure the sediments met their requirements. If no sponsor steps forward, the Corps would dispose of the material in a beneficial manner within existing Corps authority. At present, this would likely be either in-water to create shallow-water rearing habitat for fall chinook or creation of woody riparian habitat along the shoreline of the lower Snake River. See response to comment 26 above regarding testing of dredged materials.

O-88

Organization
Nez Perce Tribal Executive Committee
Comment 28
The draft DMMP/EIS states that a detailed monitoring plan will be presented in the final plan. Once the final plan is published, it is too late of the public to comment on its adequacy or inadequacy. Monitoring is a critical component of any plan, and it is essential that the public have the opportunity to evaluate and comment on it.
Response
A monitoring program is included as Appendix M of the Final DMMP/EIS. The Corps will provide at least 30 days for public consideration of the Final DMMP/EISbefore Record of Decision is signed.

Organization
Nez Perce Tribal Executive Committee
Comment 29
Such (conflicting) statements (in 3.1.1.1 Anadromous Fish) do not provide sufficient proof that no

harm will occur as required under the Endangered Species Act. Certainly, any fish that are present will be harassed by the dredging activities in violation of the ESA.
Response
Fall chinook typically have an ocean type rearing life history and typically outmigrate seaward during the summer as subyearlings (Tiffan et al, 2001). According to Williams and Bjornn 1998, "A small proportion of hatchery and natural subyearling fall chinook salmon residualized and migrated early in spring 1997; however, as with fish released in 1995, the number that overwintered and migrated seaward as yearlings in spring was small and did not effect survival estimates." This indicates that that only a small proportion of fall chinook may over winter every year. Dredging with a clamshell during the two specified periods, and when fish are expected to be at low abundances, are acceptable methods for reducing the possible entrainment of fish. Although the Corps understands that this may still have impacts on adult Steelhead and rearing juvenile salmonids, the NMFS Biological Opinion (2000) indicates that the dredging and disposal actions are not jeopardizing the continued existence of the ESA listed species.

Organization
Nez Perce Tribal Executive Committee
Comment 30
The volume of relocated sediment caused by the dredging is a particular area of concern. The lower Snake River has a large sediment load that would be exacerbated by the dredging through re-suspension of sediments into the water column. Increased sediment has particularly harmful habitat impacts, and negatively affects all life cycles of fish. Sediment can also affect fish downstream and even system-wide. Even if few threatened salmonids are present at the time of the scheduled dredging, it is important that they not be harmed.
Response
The reason the confluence and off channel areas need to be dredged is because finer material has been deposited there over the cobbles that currently form the river- bed. The US Fish and Wildlife Service indicates that there is little evidence that dredging operations actually cause any of the problems for fish attributed to high turbidity (Allen and Hardy, 1980). In fact the criteria of not exceeding 5 NTUs over the background level for turbidity while dredging is relatively conservative. Although turbidity may cause stress, Gregory and Northcote (1993) have shown that moderate levels of turbidity (35-150 NTU) accelerate foraging rates among juvenile chinook salmon, likely because of reduced vulnerability to predators (camouflaging effect). While sediment can have negative impacts on fish, many scientists in the region have indicated that an increased sediment load during the outmigration may serve as a benefit to migrating fish by reducing predation.

Organization
Nez Perce Tribal Executive Committee
Comment 31
The draft DMMP/EIS asserts that a small portion of the total life history of these fish is spent under direct influence of the hydro-system. This statement is misleading since it does not state the important fact that the time under the influence of the hydro-system is critical to the continuing survival of the fish. In addition, the statement is inaccurate.
Response
Every life stage is critical to a fish with one no more critical than the other. Attempting to ascertain how long fish are within the influence of the hydrosystem is a difficult concept.

Considering that the hydroprojects on the Snake and Columbia rivers span seven states and two Canadian Provinces, with hydroprojects from numerous agencies affecting how water is distributed down river, it is difficult to determine when the affect actually occurred or when it ends, if it does. However, in the area of influence of the dredging, the life stage of spring/summer chinook is measured in typically less than a week out of a four to five year average lifespan. In addition, fall chinook that rear in Hells Canyon and the lower Snake River, typically rear and outmigrate the same year, spanning approximately six months (the primary reason the Corps is trying to increase suitable habitat for this species for rearing). Snake river fall chinook typically have an ocean type rearing life history and typically outmigrate seaward during the summer as subyearlings. (Tiffan et al, 2001). According to Williams and Bjornn 1998, "A small proportion of hatchery and natural subyearling fall chinook salmon residualized and migrated early in spring 1997; however, as with fish released in 1995, the number that overwintered and migrated seaward as yearlings in spring was small and did not effect survival estimates." This indicates that only a small proportion of fall chinook may over winter every year in the reservoirs.

As part of the monitoring plan, outlined in the NMFS Biological Opinion (2000) for the DMMP, one of the reasonable and prudent measures under section C.2.5, includes examining the backwater habitats in the proposed dredging areas prior to dredging to determine the spatial and temporal distributions of rearing salmonids, and habitat use. In addition, the overwintering of adult steelhead is known to occur in the project area. As a result, the Corps is using the in water work windows to attempt to dredge when abundances of these fish are the lowest, and to use methods that will be less likely to entrain fish.

Therefore, our statement of low fish residence time in the area is accurate for most species. However, a small proportion of individuals may overwinter in the proposed work areas. For this reason, the DMMP/EIS indicated that proposed activities may likely adversely affect most of the ESA listed species in the project area. However, the NMFS Biological Opinion (2000) for the DMMP indicates that The Corps will not be jeopardizing the continued existence of these species by dredging and disposing of material in the project area.

Organization
Nez Perce Tribal Executive Committee
Comment 32
Clearly, the impacts on habitat of dredging at the scale proposed directly contradict these goals (restoration of salmon habitat, as described in the NMFS Biological Opinion on the Federal Hydropower System).
Response
On the contrary, creating habitat in the mainstem river from where there is currently none or poor habitat is consistent with the NMFS Biological Opinion (2000). This in combination with the Woody Riparian Habitat Program through the Lower Snake River Compensation Plan is meant to create significant mainstem habitat improvements. Action 155 states " BPA, working with the Corps will take immediate steps to begin to address these uncertainties by collecting baseline data, improving mainstem reaches in ways that mimic the range and the diversity of historic habitat conditions as much as possible, and monitoring and evaluating the results." For this project, the Corps has met the baseline data gathering and is now attempting to mimic the habitat that was in place prior to the hydrosystem completion.

Organization
Nez Perce Tribal Executive Committee
Comment 33
With respect to bull trout, the draft DMMP/EIS acknowledges that there is the potential for fish to be displaced from the dredging area. It also asserts that any bull trout in the area would be startled and move away from the disturbance, thus preventing direct harm. However, the noise or shock wave associated with release of dredged material, as well as the sudden change in light that would cause the startle reaction has the potential to cause excess energy expenditure as well as loss of habitat. The Endangered Species Act prohibits harassment of this type. The findings that dredging and disposal operations may affect, but are not likely to adversely affect bull trout ignores the potential habitat loss and harassment described above.
Response
Only a small proportion of bull trout may over winter in the project vicinity. Dredging with a clamshell during the two specified periods, and when fish are expected to be at low abundances, are acceptable methods for reducing the possible entrainment of fish (see Appendix G). The Corps understands that this may still have impacts on bull trout. However, the dredging and disposal actions would not jeopardize the continued existence of the ESA listed species (see Appendix G) and Section 4.3 of the DMMP/EIS.

The Corps realizes that dredging and disposal of material in the lower Snake River and McNary Reservoir may have negative impacts to some ESA-listed fish in the project areas. Although bull trout have been documented in the lower Snake River, there is no evidence of them using the river during the summer months. In addition, bull trout spawn in August and September, a period when temperatures would have exceeded 59°F even before the hydrosystem was in place. Evidence suggests that adfluvial (migratory) from the Tucannon River also utilize the mainstem Snake River on a seasonal basis (November – May). These fish most likely forage in shallow areas where the majority of prey exists. Thus, even though bull trout may be present in the river during times of dredging, they would be using portions of the river that would not be impacted by the dredging operation. The current proposed disposal of dredged material at Chief Timothy HMU has the remote chance of displacing bull trout. However, due to the distance to the Tucannon River from this site, this possibility is very remote.

Thus, given the small likelihood that bull trout will be present and that the dredging will occur in the channel and not in the areas used by bull trout, impacts to bull trout are discountable and the not likely to adversely affect bull trout is valid.

Organization
Nez Perce Tribal Executive Committee
Comment 34
The changes in reservoir levels harm cultural resources. Although the dredging is intended to go no deeper than the natural river bottom, it is not clear that the dredgers will know they have reached that point until they dredge up river rocks, at which point they will have already disturbed any cultural properties. In addition, cultural properties at disposal sites for dredged materials could suffer long-term impacts, especially those that are currently underwater and so difficult to identify.
Response
The second paragraph of Section 4.5.1.1 of the EIS has been modified to further define Corps specifications of dredging depths in the contract and the usual methods employed by the dredging contractor and the Corps to monitor the resulting depth of the dredging activity.

The Corps contract drawings and specifications identify the horizontal limits of the dredging areas as well as target elevations to define the depth of required dredging. In most cases in the Snake and Columbia Rivers within the Walla Walla District, the Corps specifies one foot of depth beyond the authorized 14-foot channel depth as an advanced measure allowance. Dredging of this additional foot is allowed to increase the time between dredging activities required at a particular location. The target depth is usually set at 15 feet below the minimum operating pool level. The Corps also establishes a payline elevation one foot below the target depth as an allowable overdredge to afford the contractor some margin for error in his dredging activity. The Corps will only pay for material that is removed down to the payline elevation. For maintenance dredging, payline elevations established will not be below the surface of the original riverbed or shoreline material. Although the Corps does not impose a monetary penalty on the contractor for exceeding the depth established by the payline elevation, the contractor will experience a reduction in profit if the contractor removes material for which there is no compensation. The contractors are generally very careful not to remove material below the payline, as this increases their operating expenses with no offsetting compensation.

Both the Corps and the dredging contractor monitor the resulting depths of the dredging activity. The Corps specifies a pre-activity survey to establish bottom elevations prior to the dredging activity. During the activity, the contractor continuously monitors the depth of dredging usually by the following methods. Just prior to beginning dredging at a location, the contractor establishes the water surface elevation using survey methods based on an on-land survey monument or control point. The contractor then marks the support cable of the dredge clamshell or the arm of the hydraulic excavator so that the lowest part of the extended bucket is between the target dredge elevation and the payline elevation (as described above) when the cable (or arm) mark is at the water surface. Monitoring of the mark relative to the water surface tells the contractor when he is close to the target elevation. When the contractor is satisfied that he is between the target elevation and the payline elevation, he generally uses a depth sounder to verify that he reached the target elevation and did not leave any high points within the dredging template or prism. The Corps specifies a post-activity survey, compares this information with the pre-activity survey, and uses the results to establish the volume of material removed above the payline, and thereby the payment amount.

O-90

Organization
Nez Perce Tribal Executive Committee
Comment 35
In a November 23, 2001 letter to the Nez Perce Tribe, the Corps stated their intention to do cultural resources assessments of all Alternative 4 undertakings on a case-by-case basis. The Tribe supports this assessment process.
Response
Your comment is noted.

Organization
Nez Perce Tribal Executive Committee
Comment 36
Water quality effects of the dredging acknowledged in the draft DMMP/EIS include turbidity plumes, re-suspension of materials, and ammonia. Turbidity is known to be harmful to all life

stages of fish. It leads to an increase in salinity, which harms freshwater biota that cannot osmoregulate even a small increase in salinity. Ammonia is toxic to aquatic organisms. Toxic compounds are also a concern. What are those levels? How do they compare to projected increased turbidity from dredging? Until these questions are answered, no accurate assessment of the impacts of increased turbidity from dredging can be made. Increased turbidity is also a concern since as suspended particles absorb heat resulting in increased water temperatures.
Response
Increases in turbidity are expected to be localized to the immediate area of the dredging and dredged material disposal activities, and be limited to the duration of the dredging project. Because most dredging would be performed in the winter, when air and water temperatures are relatively low and solar heating is minimal, temperature impacts due to short-term turbidity increases at the dredge site are expected to be minimal.

During implementation of the DMMP, the dredged material evaluation framework will guide assessment of sediment and water quality, and a sampling analysis plan and monitoring plan will be developed for each individual dredging project. Sediments to be dredged will be sampled and analyzed for grain size distribution and selected chemical constituents. Site-specific sampling performed prior to dredging will include an analysis of ammonia in the sediment and water. If nitrogen concentrations in the sediments exceed the threshold level stated in the dredged material evaluation framework, elutriate testing will be performed prior to dredging to ensure that dredging will not exceed permitted levels.

Results of sediment sampling will be used to develop a site-specific monitoring plan, which will be implemented to minimize impacts to downstream water quality. Monitoring will include turbidity, ammonia, temperature, and pH, along with other chemical constituents if sediment-sampling results indicate potential for partitioning chemical constituents from sediment into water. Site-specific sampling data and monitoring plans will be reviewed by appropriate water quality regulatory agencies prior to dredging as part of the Clean Water Act 401 certification process. Information gathered during each dredging activity will be applied to future dredging projects within in the 20-year period. If data gathered during dredging and/or disposal activity indicates that levels of turbidity, ammonia, temperature, and pH caused by the dredging are not in compliance, the dredge operation will be curtailed until measures are taken to bring the activity into compliance.

Organization
Nez Perce Tribal Executive Committee
Comment 37
Changes in oxygen concentrations at the sediment-water interface can also affect pH and the redox state of sediment associated with contaminates or nutrients. A scientific analysis of potential sediment nutrient and chemical contaminate mobilization due to changes in oxygen concentration is not provided in the draft DMMP/EIS. Specifically, the short and long-term site-specific impacts to phytoplankton seasonal succession patterns and production should be discussed. In addition, the draft DMMP/EIS should include an analysis of the mobilization potential of sediment-associated contaminates, the concentration of these contaminates in the in-water disposal sites, the size of the turbidity plume, and the potential for bioaccumulation of contaminates through food web interactions.
Response
During implementation of the DMMP, a sampling analysis plan and monitoring plan will be developed for each individual dredging project. Sediments to be dredged will be sampled and

analyzed for grain size distribution and selected chemical constituents. Results will be used to develop a site-specific monitoring plan, which will be implemented to minimize impacts to downstream water quality. If sediment sampling results indicate relatively high levels of nutrients or regulated chemical constituents, elutriate testing or water quality modeling (for example, using the ADDAMS DREDGE module) will be performed to evaluate potential partitioning of chemical constituents from sediments into water and downstream migration.

Monitoring will include turbidity, ammonia, temperature, and pH, along with other chemical constituents if sediment sampling results indicate the potential for partitioning of chemical constituents from sediments into water. Site-specific sampling data and monitoring plans will be reviewed by appropriate water quality regulatory agencies prior to dredging as part of the 401 permitting process.

Sediment sampling results will also be used to determine if sediments are suitable for in-water placement. Sediments will be placed at upland sites if analyses indicate that the sediment grain-size distribution or chemical composition is unsuitable for in-water placement. The Dredged Material Evaluation Framework (Appendix J) will guide evaluation of sediment.

Because dredging operations will be monitored and managed to minimize downstream migration of sediment and associated chemical constituents, long-term impacts to biota will also be minimized. Increases in turbidity due to dredging are expected to be localized to the immediate area of the dredge site and be limited to the duration of the dredging project. Thus, short-term impacts to biota are expected to be limited to the immediate area of the dredge site. As part of the Reasonable and Prudent Measures set out by the National Marine Fisheries Service's Biological Opinion, the Corps is directed to assess the habitat that is currently in the reservoir both before and after dredging occurs. Information gathered during each dredging activity will be applied to future dredging projects within in the 20-year period.

Organization
Nez Perce Tribal Executive Committee
Comment 38
The proposed dredging could cause the release of ammonia (NH_3), which is toxic to aquatic life. Both nitrate and ortho-phosphate could also be released. Despite the statement in the draft DMMP/EIS that small releases of phosphorus should not pose a problem, in a situation where nitrogen compounds are elevated, a very small amount of phosphorus can cause algae blooms to occur. The proposed on-site testing for these compounds is not adequate for avoiding impairment of water quality and possible harmful impacts to aquatic organisms.
Response
On-site sampling and monitoring, and adaptive management of dredging and in-water placement activities will be performed to comply with applicable water quality regulations and the NMFS Biological Opinion (2000). NMFS has determined that these measures will minimize adverse impacts to Essential Fish Habitat and aquatic organisms.

Organization
Nez Perce Tribal Executive Committee
Comment 39
The existence of toxic substances in sediments is a concern. Given the past variability in the

detection of these chemicals it is unclear whether the 2000 sediment contaminate data is truly representative of what will be found throughout future dredging activities. Furthermore, the draft DMMP/EIS gives assurance, without providing the supporting science and data, that contaminate levels are below those that would eliminate an in-stream disposal option.
Response
The findings presented in the DMMP/EIS are based upon multiple years of sediment sampling and analysis data. See response to Save our Wild Salmon's comment 16.

Organization
Nez Perce Tribal Executive Committee
Comment 40
Another concern of the Nez Perce Tribe is the reliability of the toxic substance data set for assessing water quality and public health impacts. Complete baseline sampling of toxic substances must be performed in any proposed dredging area before dredging occurs.
Response
Site-specific sediment sampling will be performed for each individual project prior to dredging, in accordance with the dredged material evaluation framework. Sediments to be dredged will be sampled and analyzed for grain size distribution and selected chemical constituents. Analytes will be selected based on site-specific characteristics. Sampling data and monitoring plans developed for each site will be reviewed by appropriate water quality regulatory agencies prior to dredging as part of the 401 permitting process.

Organization
Nez Perce Tribal Executive Committee
Comment 41
The Corps has not provided the supporting scientific evidence that the presence of sediment-associated contaminates will be consistent with the State of Washington Surface Water Quality Standards. An ecosystem-level analysis of the potential exposure to toxic contaminate is required in order to provide reasonable assurances that public health and aquatic wildlife will not be negatively impacted through exposure to these contaminates during and after dredging operations.
Response
Existing sample analyses along with additional sampling prior to dredging would fulfill regulatory requirements to protect water resources and fish and their habitat. The methodology for dredge sampling is contained in Appendix J (Dredged Material Evaluation Framework) of the DMMP/EIS. Additional information concerning monitoring requirements during dredging is contained in NMFS' Biological Opinion (2000) and the Monitoring Program (Appendices F and M). The process identified in Appendix J – Dredged Material Evaluation Framework, is, in part, based on data indicating that there is a high correlation between the proportions of fines and organics and the level of contaminants. The framework is structured to identify sediments that have the potential to contain levels of contaminants that could have adverse effects on the ecosystem and prohibit in-water disposal of those sediments.

Organization
Nez Perce Tribal Executive Committee
Comment 42
The document says that the Corps plans to evaluate the issue (contaminated sediment) further and determine what, if any, additional testing and analysis may be needed. It is clear that more testing is needed.
Response
As noted in the response to comment 41 above, the Dredged Material Evaluation Framework will guide sediment sampling and analysis pursuant to the DMMP.

Organization
Nez Perce Tribal Executive Committee
Comment 43
The draft DMMP/EIS states that "Dredging the navigation channel downstream of the dams should have little effect on water quality since the material to be removed is expected to be river cobbles with some larger rocks with very small amount of fines." This conclusion cannot be accepted.
Response
The information presented regarding grain-size distribution in Section 3.9.2.2 is based on available data. Additional site-specific data will be collected prior to each dredging project. Contaminants generally bind with fines. Historically sediments at these lock approaches have been mostly cobbles, with little fines. Because very little fines are likely to be present, there is a low probability of contaminants and dredging would cause little turbidity. However, to verify the absence of fines and contaminants, the Corps will sample sediment and monitor water quality during dredging and disposal activities. Site-specific sampling data will be used to develop a monitoring plan that will be implemented during dredging and to determine whether or not dredged material is suitable for in-water placement.

Organization
Nez Perce Tribal Executive Committee
Comment 44
The Corps does not adequately address health impacts from potential exposure to contaminates from the long-term direct, indirect, and cumulative impacts related to the proposed dredging in the draft DMMP/EIS. The absence of 2,3,7,8 TCDD, the most toxic form of dioxin, in the Corps sediment samples is insufficient reason to conclude a non-significant human health risk from organochlorines. Simply stating that these contaminates occurred in "small amounts" is insufficient evidence to conclude a FONSI to Tribal and non-Tribal community health.
Response
See response to comment 41 above.

Organization
Nez Perce Tribal Executive Committee
Comment 45
How did the Corps decide on the 5-NTU over background number? Is there any scientific support for that number?

Response
This number is based on state water quality standards. As stated in Section 3.9.1.2, water quality standards in Idaho and Washington specify that turbidity shall neither exceed 5 NTUs over background levels when the background level is 50 NTUs or less nor have more than a 10 percent increase when background is more than 50 NTUs. These regulatory standards were used to determine the operational criteria described in Section 4.1.1. Also see response to comment 30 above.

Organization
Nez Perce Tribal Executive Committee
Comment 46
Additionally, even "short-term" impacts can have long lasting effects on aquatic life. The draft DMMP/EIS also fails to define what is meant by "short-term," and appears to be guessing at how long it would take to accomplish the reduction.
Response
"Short-term" refers to impacts that are limited to the duration of the dredging activity. Dredging and in-water placement activities will be performed to comply with applicable water quality regulations and the Reasonable and Prudent Measures and Terms and Conditions of the NMFS Biological Opinion (2000). NMFS has determined that these measures will minimize adverse impacts to Essential Fish Habitat.

The US Fish and Wildlife Service indicates that there is little evidence that dredging operations actually cause any of the problems for fish attributed to high turbidity (Allen and Hardy, 1980). The criteria of not exceeding 5 NTUs over the background level for turbidity while dredging is relatively conservative. Although turbidity may cause stress, Gregory and Northcote (1993) have shown that moderate levels of turbidity (35-150 NTU) accelerate foraging rates among juvenile chinook salmon, likely because of reduced vulnerability to predators (camouflaging effect).

Organization
Nez Perce Tribal Executive Committee
Comment 47
The Corps lacks an adequate emergency response plan to address situations where turbidity exceeds the state of Washington Water Quality Standard. . . . However, cessation of dredging cannot mitigate for impaired water quality. Detailed, procedural steps for addressing elevated turbidity and the associated mitigation measures should be included in the draft DMMP/EIS. In addition, the short and long-term impacts resulting from these incidents on the plant, benthic, and fish community should be more thoroughly described.
Response
Turbidity will be monitored as described in the DMMP and site-specific monitoring plan developed for each dredging project. As described in the DMMP, turbidity exceeding regulatory acceptable levels will be addressed by modifying and/or ceasing dredging practices. Appropriate regulatory agencies (for example the Washington Department of Ecology) will determine the time period within which modified dredging methods must meet regulatory acceptable turbidity levels.

The US Fish and Wildlife Service indicates that there is little evidence that dredging operations actually cause any of the problems for fish attributed to high turbidity (Allen and Hardy, 1980). The criteria of not exceeding 5 NTUs over the background level for turbidity while dredging is

relatively conservative. Although turbidity may cause stress, Gregory and Northcote (1993) have shown that moderate levels of turbidity (35-150 NTU) accelerate foraging rates among juvenile chinook salmon, likely because of reduced vulnerability to predators (camouflaging effect).

Additionally, as part of the Reasonable and Prudent Measures set out by the National Marine Fisheries Service Biological Opinion, the Corps is to assess the habitat that is currently in the reservoir both before and after dredging occurs. Information gathered during each dredging activity will be applied to future dredging projects within in the 20-year period.

Organization
Nez Perce Tribal Executive Committee
Comment 48
These references (studies cited in section 4.1.7 of the DMMP) however, are the work of a single author whose research is funded by the Corps. This is not adequate scientific evidence. Also, there are no references to research showing that dredging actually benefits benthic macroinvertebrates or white sturgeon.
Response
Numerous scientists from federal, state, university and tribal agencies set up the study design referenced in the comment. These agencies include the US Army Corps of Engineers, U.S. Fish and Wildlife Service, National Marine Fisheries Service, ESSA, Battelle-PNNL, Washington Department of Fisheries, Oregon Department of Fish and Wildlife, University of Idaho, University of Washington, Oregon State University, and the Yakama Indian Nation. The lead researcher involved with many of the studies was David Bennett, Ph.D., a tenured professor at the University of Idaho. With a multiple year study design, a lead researcher who is a leading expert in this field, and a study design from the region's leading experts, the Corps believes that the science behind the proposed aquatic habitat creation with dredged materials is sound. (Web et al. 1987)

In addition, the NMFS' Biological Opinion (2000) for operation of the FCRPS indicates that the Corps is supported in these actions. Action 155 states: "BPA, working with the Corps will take immediate steps to begin to address these uncertainties by collecting baseline data, improving mainstem reaches in ways that mimic the range and the diversity of historic habitat conditions as much as possible, and monitoring and evaluating the results." For this project, the Corps has met the baseline data gathering through David Bennett's work and is now attempting to mimic the habitat that was in place prior to the hydrosystem completion.

Regarding potential effects or benefits to macroinvertebrates and sturgeon, see response to the Idaho Dept. of Fish & Game's Comment 21.

According to the NMFS' Biological Opinion (2000): "One impact of this habitat removal would be the temporary loss of some potential prey species (invertebrates) and their habitat. Aquatic invertebrates, particularly dipterans, are an important food item of juvenile chinook salmon and steelhead in the Lower Snake River (Bennett and Shrier 1986, Curet 1994)."

The NMFS Biological Opinion (2000) further states:

> The majority of dredging would focus on navigation lanes where oligochaetes and chironomids (dipterans) are the dominant invertebrates. These invertebrates are likely to be disturbance tolerant as their habitat is constantly modified by sediment accumulation and dredging. Post-dredging recolonization would likely occur rapidly through drifting and crawling from adjacent non-disturbed areas (e.g., Mackay 1992). Because the dredging would focus mainly on a relatively narrow portion of the river bed (navigation lanes), the temporary loss of invertebrate habitat is unlikely to limit food production or significantly affect foraging opportunities within the reservoirs.

Organization
Nez Perce Tribal Executive Committee
Comment 49
The Tribe questions the need for hydraulic dredging. Can it be done without agitating the sediments, as stated in the draft DMMP/EIS? We also question the use of slurry for wildlife planting areas or to restore eroded streambanks for the reasons stated above in the General Comments section.
Response
Turbidity generated at the dredging location by hydraulic dredging operations would be monitored to ensure compliance with the Clean Water Act. The Corps' last hydraulic operation in the Snake River did not exceed turbidity limits in effect at that time.

An in-water disposal of the slurry from hydraulic dredging would most likely require provisions for barriers or containment structures to keep the dredged material isolated from the water column long enough to settle out. Again, monitoring would be performed to ensure that turbidity created by the disposal operation stayed within acceptable limits pursuant to the Clean Water Act.

Organization
Nez Perce Tribal Executive Committee
Comment 50
In violation of NEPA, the draft DMMP/EIS fails to disclose the current likely cumulative effects resulting form the synergistic disturbance caused by the Snake and Columbia River dams, land use activities upstream of the project area, barge traffic, past and future dredging activities, and levee modifications.
Response
The Draft DMMP/EIS did consider the historic alterations to the Snake and Columbia River systems in evaluating the affected environment. The DMMP/EIS cumulative effects analysis evaluated the additive and/or synergistic effect of the proposed action, when considered with past, present, and reasonably foreseeable actions (such as dams, navigation, historic dredging, etc.). See Section 4.14). In addition, this section has been expanded to include more analysis.

Also see response to Save our Wild Salmon's comment 25.

Organization
Nez Perce Tribal Executive Committee
Comment 51
The cumulative effects on public health from exposure to chemicd contaminates is also missing. Specifically, this cumulative analysis should examine the potenfal for concentrating these sediment-associated contaminates over time in the newly created shallow water habitat, the

localized and downstream water quality impacts resulting from the mobilization of these contaminates due to embankment failure, the potential for bioaccumulation of contaminates in fish tissue, and exposure to contaminates from recreational activities.

Response

Sediment quality as it relates to proposed dredging and submerged habitat creation would be monitored on a programmatic basis through the duration of the DMMP. This monitoring would allow the Corps and resource management agencies to assess whether there may be the potential for accumulating or concentrating chemicals over time. In addition, dredged material would not be used on swim beaches and there is very little chance of direct contact with dredged materials by the general public. A dredged material evaluation framework will be utilized to guide the on-going sediment analysis. Based on existing sediment data, cumulative effects associated with sediment contaminants are not expected.

Organization

Nez Perce Tribal Executive Committee

Comment 52

Additionally, there is no mention of the cumulative effects on river morphology, both up and downstream of the Project Area and disposal sites, from repeated major disturbance caused by dredging and in-water disposal.

Response

The proposed action is no greater in scope or magnitude than past actions have been. The proposed action would maintain the dimensions that were established when the reservoirs were created. Through beneficial use of dredged material the Corps would establish features lost through development of dams (riparian shorelines and submerged bars).

Organization

Nez Perce Tribal Executive Committee

Comment 53

Another concern that is not addressed is that the ongoing nature of the dredging may prevent the establishment of spawning and rearing use of the Project Area.

Response

Areas where spawning is expected to occur in the lower Snake River would not be dredged under this DMMP. We have proposed to dredge areas that typically have no spawning habitat and likely never would based on flow and sediment characteristics in these locations. In addition, the creation of rearing habitat along the shorelines would serve to increase fish habitat in the reservoirs and benefit endangered species.

Structure of the habitat sites is indicated in Appendix F. The extent of the structures, including locations, slopes, depths and general schematics of each individual site, are outlined in Plate F-1 and Figure F-2, and size of the habitat units are in Table F-4. We agree that there are no citations for creating the disposal sites. However, the Corps has a developed disposal plan for creating these habitats.

An analysis of historic sandbar habitats was performed using aerial photos of the Snake River pre-impoundment. To define a minimum habitat acreage that would benefit juvenile salmonids, an average of the smallest sand habitat areas was calculated at 4 acres. This is below the average size for the majority of the habitats that were historically in the river. However, it was deemed a

minimum for salmonid habitat. The proposed acreages for habitat are outlined on page F16 and range from three to 87 acres. However, option 5 at Granite Point (3 acres) is less than the four-acre criterion and may need to be abandoned as a potential disposal site.

In 1992, eggs and alevins were discovered and some were destroyed while dredging in front of the Juvenile Fish Facility and Powerhouse, however, not on the navigation lock side of the river. However, all dredging in the tailrace of Lower Monumental Dam covered under the DMMP will occur in the navigation channel. It is believed that the velocities on the navigation lock side of the river in this location are insufficient for attracting fish to spawn in these locations. Multiple years of survey occurred after the 1992 incident and no redds were ever found again downstream from Lower Monumental Dam (Dauble et al 1998). THE NMFS Biological Opinion for the DMMP indicates, in section VII.C.1.3., the Corps will not dredge in the tailraces of the dam until redd surveys have been completed, as anticipated by the Corps (Appendix F).

Organization

Nez Perce Tribal Executive Committee

Comment 54

The Nez Perce Tribe may have other comments and concerns regarding the draft DMMP/EIS but had insufficient time to thoroughly assess the extensive documents.

Response

Your comment is noted. Review timeframes for the Draft DMMP/EIS were consistent with the requirements of NEPA and the Council on Environmental Quality's regulations implementing NEPA. The public will have a 30-day period to consider the Final EIS and the Corps will consider all new information provided before making a final decision regarding the DMMP.

The American Waterways Operators

Pacific Regional Office

3815 West Marginal Way, SW
Seattle, WA 98106

TEL: (206) 788-3328
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Jerry McMahon
Vice President-Pacific Region

January 2, 2002

DMMP/EIS
Attn.: Jack Sands, Project Manager
U.S. Army Corps of Engineers
Walla Walla District
201 North 3rd Avenue
Walla Walla, WA 99362

Dear Mr. Sands:

I write on behalf of the American Waterways Operators (AWO), the national trade association for the inland and coastal tugboat, towboat and barge industry, in support of the resumption of annual dredging and the maintenance of a Congressionally authorized 14 foot channel throughout the Snake River navigation system.

O-95

AWO believes that dredged materials and spoils should be disposed of in an environmentally responsible and cost effective manner. However, the decisions
1 regarding the disposal of disposal of dredged materials and spoils should not impede or paralyze the overall objective of maintaining the navigation channel. We are concerned
2 that maintenance dredging within the district is on hold pending approval of a dredging plan by NMFS. We understand that isolated maintenance dredging is being conducted but we are all aware, that heavy precipitation this winter will produce freshets with significant new sediments in the navigation channel. We strongly urge that the Corps of Engineers along with other federal agencies work together to ensure the timely
3 resumption of necessary maintenance dredging throughout the Snake River. Absent this outcome, it is certain that navigation will be adversely affected and the regional economy will suffer.

Sincerely yours,

Jerry McMahon
Vice President-Pacific Region

Organization
The American Waterways Operators, Pacific Regional Office
Comment 1
However, the decisions regarding the disposal of dredged materials and spoils should not impede or paralyze the overall objective of maintaining the navigation channel.
Response
Your comment is noted.

Organization
The American Waterways Operators, Pacific Regional Office
Comment 2
We are concerned that maintenance dredging within the district is on hdd pending approval of a dredging plan by NMFS.
Response
Maintenance dredging was not on hold pending NMFS approval, but rather the completion of a programmatic plan for long-term dredged material management. NMFS has issued a Biological Opinion finding that the proposed maintenance dredging and dredged material management would not cause jeopardy to endangered fish stocks.

Organization
The American Waterways Operators, Pacific Regional Office
Comment 3
We strongly urge that the Corps of Engineers along with other federal agencies work together to ensure the timely resumption of necessary maintenance dredging throughout the Snake River. Absent this outcome, it is certain that navigation will be adversely affected and the regional economy will suffer.
Response
Your comment is noted.

O-96

COLUMBIA RIVER TOWBOAT ASSOCIATION

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Phone (503) 289-3046, Fax 283-1479

December 21, 2001

DMMP/EIS
Attn: Jack Sands, Project Manager
U.S. Army Corps of Engineers
Walla Walla District
201 North 3rd Avenue
Walla Walla, WA 99362-1876

Re: Draft DMMP/EIS

Dear Mr. Sands:

We would like to make a few comments on the recently-released Draft DMMP/EIS. The Columbia River Towboat Association (CRTA) represents the tug and barge industry that uses the navigation system maintained by the Walla Walla District. We have a very direct stake in how the District manages its dredging program. If the District cannot dispose of the dredged material, it will not be able to maintain the 14-foot channel necessary for our continued operation on the Snake River and McNary pool. As you know, all maintenance dredging within the District is on hold until you can operate under an approved plan, and as things stand now, channel depths at certain locations are maintained only because reservoirs are kept above minimum operating pools. As we are all very aware, this is a situation that cannot continue indefinitely. Each new freshet brings additional sediment to the navigation channels, and we will inevitably lose the ability to raise pool levels high enough to maintain the channel depth.

O-97

The Process Should Not Impede Channel Maintenance

1 Therefore we are very interested in your plans to deal with dredged materials. As a general statement of our position, we would like to say that we believe that while dredged materials should be disposed of in an environmentally and economically responsible manner, the decision-making process for doing this should not impede the overall objective, which is to get the dredging done and the channels maintained.

Of course, the DMMP/EIS is an effort to overcome the current gridlock and provide a mechanism for a more efficient process in the future. We support that effort, and we hope that the final DMMP/EIS will be approved in a timely manner.

However, we would like to raise a few points that give us pause about whether the proposed plan will in fact provide the necessary efficiency.

Local Sediment Management Group

2 The use of a Local Sediment Management Group to implement the DMMP would appear to be a very sensible approach to finding consensus among the various relevant agencies before a dredging plan is formally submitted to those agencies with review authority. We applaud this collaborative approach, and we certainly think it should be done. We also believe that inasmuch as the towboat industry has a major stake in the Corp's dredging decisions, we need to participate in the effort. We will be happy to accept your invitation to join the Group when it is extended.

3 The DMMP/EIS does not provide much guidance about how this process might actually work, however, and we are concerned that the forum could possibly result in the kinds of delays that we are now seeing. Will there be definite time limits set on making decisions? Would the Corps consider the recommendations of the LSMG as merely advisory, or would they carry some official weight within the Corps' own decision-making process, with potential legal consequences under administrative procedure or other federal regulations?

LSMG Should Facilitate Channel Maintenance

We note that among its general objectives the LSMG will be asked to ensure that all environmental laws and regulations will be followed, that necessary cultural resources will be protected, and that an interagency approach to dredged material management will be facilitated, etc. But nowhere do we see any suggestion that the work of the LSMG should be
4 done in a timely manner, nor is there a mention of what would seem to us to be the *sine qua non* of its existence: that its function is to facilitate channel maintenance. Without such an overarching mandate, we could be right back to the kind of interagency wrangling that has led us to the current impasse. Some of the agencies that have been asked to participate in the LSMG have little interest in whether or not channel maintenance is actually accomplished. We are not suggesting that they would necessarily be obstructionist, but their mandates are entirely different. We do suggest that for the LSMG process to work well, each participating agency must accept that the Corps has a legal responsibility to maintain the channel, and that its involvement in the LSMG is for the express purpose of helping it fulfill that responsibility. The LSMG will help determine how dredging occurs and what happens to the dredged materials, but it must do its work in a manner that does not in any way impede channel maintenance.

LSMG Should Promote Cost-Effective Management

5 Although the DMMP refers several times to the requirement that maintenance dredging be accomplished in a cost-effective manner, we are nevertheless concerned that the LSMG process might result in decisions that are not cost-effective. There is no mention that the LSMG is bound by cost considerations as it develops its recommendations. We think that this mandate should be explicit, even while recognizing that the LSMG will need to balance costs against its other objectives. Frankly, if some of the environmental and cultural preservation objectives are given excessive weight, the LSMG could make channel maintenance so extremely expensive that it would arguably cost more to maintain the channel than our economy benefits from river transportation. Since this result is an explicit goal of certain groups calling for Snake River dam breach, we think there is reason for concern, and reason enough to require that the LSMG pay close attention to the cost-effectiveness of their recommendations.

Beneficial Uses

O-98

We are particularly pleased with the emphasis that Alternative 4 places on flexibility and on beneficial uses of dredged material. Clearly, some of the anticipated higher costs of handling dredged materials in new ways can be offset by using the dredged materials for beneficial uses, and we believe that it make sense to fully explore such possibilities.

6 One of the many such possibilities involves the use of selected dredged materials for the creation of additional or improved habitats that benefit endangered fish. We think that this is an exciting idea, and we encourage the District and the LSMG to pursue it seriously. Carefully considered placement of dredged materials (to create shallow-water benches behind the dams, for example) could well result in greater habitat diversity, increased productivity and benthic yield, and could significantly benefit migrating salmonids. This is an opportunity that should be grasped. If sand and gravel dredged from the navigation channels could actually be used for the benefit of migrating endangered fish, and the biological benefits could be shown to warrant the costs, then this is something we should do. It's a classic "win/win" situation, with safe operating depths for towboats and better habitat for salmon.

O & M Budget

7 One small budgetary point should be made about this and other beneficial uses that would involve easily quantifiable costs but whose benefits would not be so easily converted into dollars and cents. If dredged materials are used for such purposes, we believe that the that O & M funds normally allocated for maintenance dredging should not be charged, especially when other more appropriate funding sources are available.

Conclusion

8 We are pleased with the content and direction of the draft DMMP, and we support your efforts to arrive at a consensus-based approach to managing dredged materials. We urge adoption of a final Plan within a time frame that permits necessary channel maintenance dredging to be done during the 2002-2003 "fish window".

Yours truly,

Jerry Grossnickle, Chairman

Organization
Columbia Towboat Association
Comment 1
As a general statement of our position, we would like to say that we believe that while dredged materials should be disposed of in an environmentally and economically responsible manner, the decision-making process for doing this should not impede the overall objective, which is to get the dredging done and channels maintained.
Response
Your comment is noted. As stated in Section 1.2 of the EIS, the purpose of the DMMP is to maintain the navigation channel and certain public facilities while also doing so in a manner that is cost-effective and environmentally acceptable. This is also Corps policy. Dredging is just one method to maintain navigation, so it is not correct to state that the overall objective is "to get the dredging done". The decision-making process is aimed at meeting the project purpose and need. It is not the Corps' intent that this process would delay the actions necessary to maintain navigation.

Organization
Columbia Towboat Association
Comment 2
The use of a Local Sediment Management Group to implement the DMMP would appear to be a very sensible approach to finding consensus among the various relevant agencies before a dredging plan is formally submitted to those agencies with review authority. We applaud this collaborative approach, and we certainly think it should be done. We also believe that inasmuch as the towboat industry has a major stake in the Corp's dredging decisions, we need to participate in the effort.
Response
Your support for the LSMG is acknowledged. Section 1.8 has been revised to show an expanded list of participants in the LSMG including non-agency groups such as ports, Tribes, and transportation interests. Your association will be invited to join the LSMG.

Organization
Columbia Towboat Association
Comment 3
The DMMP/EIS does not provide much guidance about how this process might actually work, however, and we are concerned that the forum could possibly result in the kinds of delays that we are now seeing.
Response
The Corps does not anticipate the LSMG forum will result in delays in making decisions. The Corps intends to coordinate with the LSMG early enough in the planning process to avoid delays in performing necessary future dredging. The Corps will take the recommendations of the LSMG into consideration. However, the Corps will make the final decision regarding any future dredging or dredged material disposal activities. The Corps' decisions would reflect consideration of applicable regulatory authority that some of the LSMG participants have with regard to Corps activities.

Organization
Columbia Towboat Association
Comment 4
The work of the LSMG should be done in a timely manner, nor is there a mention of what would seem to us to be the sine qua non of its existence: that its function is to facilitate channel maintenance... We do suggest that for the LSMG process to work well, each participating agency must accept that the Corps has a legal responsibility to maintain the channel, and that its involvement in the LSMG is for the express purpose of helping it fulfill that responsibility. The LSMG will help determine how dredging occurs and what happens to the dredged materials, but it must do its work in a manner that does not in any way impede channel maintenance.
Response
The purpose of the LSMG is not necessarily just to facilitate channel maintenance. The LSMG is to structure an evaluation process that assists in development of timely and cost-effective dredging that is consistent with environmental regulations. The LSMG is also to ensure that the DMMP incorporates environmental considerations when identifying disposal methods, considers methods to reduce dredging, and maximizes the beneficial use of dredged material. Section 1.8 has been revised to more clearly describe the purpose of the LSMG.

Organization
Columbia Towboat Association
Comment 5
We are nevertheless concerned that the LSMG process might result in decisions that are not cost-effective.
Response
The LSMG is to consider cost-effectiveness when recommending dredging and disposal methods. These methods must also be in compliance with applicable environmental laws and regulations. The Corps, not the LSMG, will make the final decision about how to conduct the dredging and disposal activities. The decision will follow Corps policy discussed previously in response to comment 1.

Also see response to comment 4 above.

Organization
Columbia Towboat Association
Comment 6
Clearly, some of the anticipated higher costs of handling dredged materials in new ways can be offset by using dredged materials for beneficial uses, and we believe that it makes sense to fully explore such possibilities. One of the many such possibilities involves the use of selected dredged materials for the creation of additional or improved habitats that benefit endangered fish. We think that this is an exciting idea, and we encourage the District and the LSMG to pursue it seriously.
Response
Your comment is noted.

Organization

Columbia Towboat Association
Comment 7
One small budgetary point should be made about this and other beneficial uses that would involve easily quantifiable costs but whose benefits would not be so easily converted into dollars and cents. If dredged materials are used for such purposes, we believe that the O&M funds normally allocated for maintenance dredging should not be charged, especialy when other more appropriate funding sources are available.
Response
Your comment is noted. Section 2.5.4 of the DMMP/EIS explains the cost-sharing aspects of several of the potential beneficial uses that were documented. Also see response to EPA's comment 22.

Organization
Columbia Towboat Association
Comment 8
We urge adoption of a final Plan within a time frame that permits necessary channel maintenance dredging to be done during the 2002-2003 "fish window".
Response
It is the intent of the Corps to complete the National Environmental Policy Act process and sign a Record of Decision in 2002 so that the Dredged Material Management Plan can be implemented immediately, including the decsion for the proposed dredging in the winter of 2002-2003.

Clarkston Chamber of Commerce
Columbia/Snake River Channel and Port Resolution

A RESOLUTION in support of maintaining a river channel and a river depth at each port that's suitable for travel and loading by today's ships and barges on the Columbia/Snake river system.

1 **WHEREAS,** the U.S. Army Corps of Engineers is committed by law to maintain an adequate river depth for shipping and barging; and

WHEREAS, the Northwest and the communities along the Columbia and Snake Rivers are economically dependent upon an adequate river depth for shipping and barging; and

WHEREAS, Factories, Mills, Agriculture and communities all depend upon an efficient and cost effective mode of transporting goods, and

WHEREAS, the jobs and earnings associated with having a constant and dependable barging, shipping and recreation system is intricately inner woven into the regional economy, and

WHEREAS, additional costs are incurred when ships and barges are not filled to capacity because ports and channels are not deep enough, and

WHEREAS, additional costs are incurred when goods have to be shipped by alternative transportation means, and

O-101

2 **NOW THEREFORE BE IT RESOLVED,** that the Clarkston Chamber supports proposed legislation and regulations for channel deepening projects on the Columbia River and Snake River at depths deep enough to allow for today's ships and barges to maintain a capacity load and,

3 **BE IT FINIALLY RESOLVED,** that the Clarkston Chamber supports proposed legislation and regulations for channel deepening projects that are supported by studies, which show dredging, or disposal of dredge spoils will not harm salmon or steelhead.

PASSED by the Clarkston Chamber of Commerce Board of Directors at a regular board meeting the

19th Day of December, 2001

Fred Becker, President
Clarkston Chamber of Commerce
Clarkston, WA

Submitted by the joint Natural Resources Committee of the Lewiston ID and Clarkston WA Chambers of Commerce

Organization
Natural Res. Committee of the Lewiston ID + Clarkston WA Chambers of Commerce
Comment 1
The USACE is committed by law to maintain an adequate river depth for shipping and barging.
Response
Your comment is noted.

Organization
Natural Res. Committee of the Lewiston ID + Clarkston WA Chambers of Commerce
Comment 2
The Clarkston Chamber supports prqposed legislation and regulations for channel deepening projects on the Columbia River and Snake River at depths deep enough to allow for today's ships and barges to maintain a capacity load.
Response
Your comment is noted.

Organization
Natural Res. Committee of the Lewiston ID + Clarkston WA Chambers of Commerce
Comment 3
The Clarkston Chamber supports prqposed legislation and regulations for channel deepening projects that are supported by studies, which show dredging, or disposal of dredge spoils will not harm salmon or steelhead.
Response
Your comment is noted.

Lindblad Expeditions
1415 Western Avenue - Suite 700
Seattle, WA 98101-2031
Tel (206) 403-1500
Fax (206) 403-1501

January 2, 2002

DMMP/EIS
Attn: Jack Sands, Project Manager
U.S. Army Corps of Engineers
Walla Walla District
201 North 3rd Avenue
Walla Walla, WA 99362-1876

Dear Mr. Sands:

We would like to make a few comments in support of the recently-released Draft DMMP/EIS. Lindblad Expeditions is interested in how the District manages its dredging program. If the District is not able to dispose of dredged material, it will not be able to maintain the 14-foot channel necessary for safe barge operations on the Snake River. As things stand now, channel depths at certain locations are maintained only because reservoirs are kept above minimum operating pools. As sediment continues to accumulate, we know that this situation cannot continue indefinitely.

We are therefore pleased to see that the District has developed a plan that is intended to overcome the current problems and provide a mechanism for a more efficient decision-making process in the future. We support that effort, and we hope that the final DMMP/EIS will be approved in a timely manner.

O-103

1 The use of a Local Sediment Management Group (LSMG) to implement the DMMP would appear to be a sensible approach to finding consensus among the various relevant agencies with review authority. We believe this collaborative approach can work, and we certainly think it should be tried. We urge you to focus the LSMG process on getting the dredging done in a timely and cost-effective manner as well as getting it done with environmental sensitivity.

2 We are pleased with the emphasis that the plan places on beneficial uses of dredged material. One of the possibilities involves the use of dredged materials for making additional or improved fish habitat. We think that this is an interesting idea. Carefully considered placement of dredged materials (to create shallow-water benches behind the dams, for example) could well result in greater habitat diversity and better rearing conditions for endangered fish. If sand and gravel dredged from the navigation channels could actually be used for the benefit of migrating endangered fish, and the biological benefits could be shown to warrant the costs, then this is something we should do. It's a classic "win/win" situation, with safe operating depths for barge traffic and better habitat for salmon.

We are pleased with the content and direction of the draft DMMP, and we support your efforts to arrive at a consensus-based approach to managing dredged materials. We urge adoption of a final Plan within a time frame that permits necessary channel maintenance dredging to be done during the 2002-2003 "fish window".

Yours truly,

Jeffrey C. Boyer
Director of Purchasing and Port Operations

1415 Western Avenue
Suite 700
Seattle, WA 98101

SEATTLE WA 981
PM
02 JAN

DMMP/EIS

Attn: Jack Sands, Project Manager
U.S. Army Corps of Engineers
Walla Walla District
201 North 3rd Avenue
Walla Walla, WA 99362-1876

99362+1876 25

Lindblad Expeditions

1415 Western Avenue
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Jeff C. Boyer
Director of Purchasing &
Port Operations
E-mail: jeffb@expeditions.com

Organization
Lindblad Expeditions
Comment 1
We urge you to focus the LSMG process on getting the dredging done in a timely and cost-effective manner as well as getting it done with environmental sensitivity.
Response
Your comment is noted.

Organization
Lindblad Expeditions
Comment 2
If sand and gravel dredged from the navigation channels could actually be used for the benefit of migrating endangered fish, and the biological benefits could be shown to warrant the costs, then this is something we should do.
Response
Your comment is noted.

SHAVER
TRANSPORTATION COMPANY

December, 20, 2001

DMMP / EIS
ATTN: Jack Sands; Project Manager
U.S. Army Corps of Engineers
Walla Walla District
201 North 3rd Avenue
Walla Walla, WA. 99362

Gentlemen:

We would like to make comment on the Walla Walla District's Draft Dredging Materials Plan / Environmental Impact statement. As a general statement of our position, while we
1 believe that dredging materials should be disposed of in an environmentally and economically responsible manner; the decision making process of how to accomplish this should never impede the overall objective of maintaining the navigation channel.
At this time, as you are aware, all maintenance dredging within the Walla Walla District is on hold until the Army Corps of Engineers can operate under a National Marine Fisheries Service approved plan. As it stands now, channel depths at certain locations are being maintained only because reservoirs are kept above minimum operating levels. As we all know, this situation cannot go on indefinitely as each annual freshet brings additional sediment into the navigation channel. Without the resumption of Dredging, we will ultimately lose the ability to raise pools high enough to maintain channel depths.
2 On a related note, we would point out that if cargo volumes fall because pool depths become too shallow, it will appear that the Snake River Projects are less valuable to the region; and the five year review of a breaching determination becomes more favorable to those agencies and eco-terrorists who advocate for their removal.

Sincerely yours,

Dixon Shaver
Vice President / Shaver Transportation Company

DS/gs

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O-105

Organization
Shaver Transportation Company
Comment 1
As a general statement of our position, while we believe that dredging materials should be disposed of in an environmentally and economically responsible manner, the decision making process of how to accomplish this should never impede the overall objective of maintaining the navigation channel. At this time. . . all maintenance dredging within the Walla Walla District is on hold until the Army Corps of Engineers can operate under a National Marine Fisheries Service approved plan.
Response
Your comment is noted. Maintenance dredging was not on hold pending NMFS approval, but rather the completion of a programmatic plan for long-term dredged material management. NMFS has issued a Biological Opinion finding that the proposed maintenance dredging and dredged material management would not cause jeopardy to endangered fish stocks.

Organization
Shaver Transportation Company
Comment 2
We would point out that if cargo volumes fall because pool depths become too shallow, it will appear that the Snake River Projects are less valuable to the region, and the five year review of a breaching determination becomes more favorable to those agencies and eco-terrorists who advocate for their removal.
Response
The purpose and need for the DMMP include maintenance of the authorized navigation channel in the lower Snake River and McNary reservoirs. Section 1.7 of the DMMP/EIS provides the economic justification for the plan. It is the Corps' objective to evaluate alternatives that are consistent with the purpose and need and in compliance with its regulations and guidance for dredging and dredged material management.

O-106

January 7, 2002

Lt. Col. Richard P. Wagenaar
Department of the Army
Walla Wall District, Corps of Engineers
ATTN: Dredged Material Management Plan
201 North Third Avenue
Walla Walla, WA 99362-1876

Re: Final Comments of the Save our *Wild* Salmon Coalition on the Dredged Material Management Plan Draft Environmental Impact Statement

Dear Lt. Col. Wagenaar:

This letter is written by the Save Our *Wild* Salmon coalition and its undersigned member organizations (collectively, "SOS") in order to comment on the Draft Environmental Impact Statement ("DEIS") for the Dredged Material Management Plan ("DMMP") prepared by the U.S. Army Corps of Engineers ("Corps"). The DEIS analyzes actions to be taken by the Corps to dredge the Snake and Clearwater Rivers and determines compliance with the National Environmental Policy Act ("NEPA").

SOS appreciates this opportunity to comment on the Corps' DEIS. With a combined individual membership of 6,000,000, SOS is a coalition of more than 50 sport fishing, commercial fishing, and conservation organizations – local, regional, and national – which seek restoration of wild salmon stocks throughout the Pacific Northwest to healthy, sustainably harvestable numbers. SOS previously submitted comments on an environmental assessment ("EA") on a short-term dredging plan in November of 2000, a plan that the Corps never carried out to SOS' knowledge. Those comments are hereby incorporated by reference. Additionally, SOS has reviewed and supports the comments submitted by the Nez Perce Tribe on this DEIS.

SOS, like several other interested parties, had requested an extension of the comment deadline for this DEIS. Pursuant to an agreement reached between SOS staff person Aime Wexler and a member of your staff, SOS submitted draft comments on the DEIS on the original January 7, 2002, deadline. As agreed, SOS is hereby submitting final comments on January 18, 2002. Thank you for your cooperation with regard to this extension.

O-107

General Comments

1 The DEIS is inadequate in many respects, and the Corps' preferred alternative needlessly threatens to harm imperiled salmon and steelhead inhabiting the Columbia-Snake rivers. In this document, the Corps provides four virtually identical alternatives involving substantial in-river

dredging and levee construction with various kinds of sediment disposal. Non-dredging (or
2 reduced dredging) alternatives, which would be safer for fish, are not analyzed or considered. SOS regrets that the Corps continues to move ahead with a "business as usual" approach to Columbia-Snake management, when radical changes are required. Indeed, the Corps states that its goal is to pursue the lowest-cost alternative that does not violate federal environmental law. This is hardly a lofty standard, yet one that the actions analyzed in this DEIS still fail to meet. DEIS ES-2. "Business as usual" has brought these mighty fish runs to the precipice of extinction: clearly new and more thoughtful approaches are required. This DEIS fails to exhibit this thoughtfulness.

3 One of the more disturbing features of the Corps' plan is that it entirely dismisses dam-breach scenarios, which would obviate the need for expensive and risky navigation dredging and levee construction. Even though the Corps recently announced that it would pursue a non-breach management alternative in the short term, the question of breach is far from resolved. Not only are several judicial challenges to federal river management ongoing, but the National Marine Fisheries Service's ("NMFS's") 2000 Biological Opinion governing the Federal Columbia River Power System ("2000 BiOp") sets up a review process wherein dam breach may be required in 2003 -2005 if conditions warrant. The Corps should not pretend that this eventuality is not a real one, and should explore the relative benefits of alternatives to continued harmful and expensive
4 dredging. If nothing else, the Corps should not be moving ahead with a major long-term project with serious impacts to aquatic species until a final decision on dam breach is made.

The DEIS Presents an Inadequate Range of Alternatives.

NEPA requires that an EIS contain a discussion of the "alternatives to the proposed action." 42 U.S.C. § 101(2)(C)(iii). The discussion of alternatives is at "the heart" of the NEPA process. 40 C.F.R. §1502.14. The CEQ regulations require the agency to "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. §1502.14(a). All federal agencies shall, to the fullest extent possible, "[s]tudy, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4322(2)(E); Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519-20 (9th Cir. 1992). A federal agency must look at every reasonable alternative within the "nature and scope of the proposed action," California v. Block, 690 F.2d 753, 761 (9th Cir. 1982), "sufficient to permit a reasoned choice." Methow Valley Citizens Council v. Regional Forester, 833 F.2d 810, 815 (9th Cir. 1987), rev'd on other grounds sub nom. Robertson v. Methow Valley Citizens Council, 490 U.S. 332 (1989). The failure to consider all reasonable alternatives is fatal to the adequacy of an agency's NEPA analysis. Idaho Conservation League, 956 F.2d at 1519 ("The existence of a viable, but unexamined alternative renders an environmental impact statement inadequate.")

Moreover, NEPA requires that the EIS contain a "no action" alternative. 40 C.F.R.

§1502.14. The no action alternative must be "considered in detail," Alaska Wilderness Recreation and Tourism Ass'n v. Morrison, 67 F.3d 723 (9th Cir. 1995) citing Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir. 1988), and it "serves as the benchmark by which the effects of all action alternatives are measured." Id. at 730. CEQ guidelines explain both the import and the necessity of the "no action" alternative. "[T]he regulations require the analysis of the no action alternative even if the agency is under a court order or legislative command to act. This analysis provides a benchmark, enabling decisionmakers to compare the magnitude of environmental effects of the action alternatives. . . . Inclusion of such an analysis in the EIS is necessary to inform the Congress, the public, and the President as intended by NEPA." 46 Fed. Reg. 18,026 (March 16, 1981) ("Forty Most Asked Questions Concerning CEQ NEPA Regulations.") (emphasis added).

Clearly, the Corps has failed even to pay lip service to these fundamental requirements of NEPA. Instead, it has presented four virtually identical alternatives that differ from each other in only the most marginal respects. The three "action" alternatives all call for equivalent amounts and methods of in-river dredging work and construction of identical levees along the Snake River. The differences between the alternatives relate exclusively to the method of disposal of dredged materials. Alternative 2 proposes in-river disposal, Alternative 3 proposes upland disposal, and Alternative 4 proposes to establish a process under which disposal decisions are made on a case-by-case basis, but that will likely include at least some in-river disposal as called for in alternative 2. This is hardly a sufficient scope of different alternatives to offer a reasoned choice of options: absent meaningful consideration of non-dredging or reduced dredging alternatives, the DEIS is fatally flawed. Even more remarkably, the Corps compares these actions to a "no-action" alternative that is itself virtually indistinguishable to all of the others. Clearly, a "no action" alternative that involves as much "action" as this one is invalid to meet the purposes described above, even if continued dredging was truly required, which SOS disputes.

5

6

The Corps failed to evaluate non-dredging (or reduced dredging) alternatives such as lighter barges or reduced commodity shipping. The Corps presents the Congressional authorization to pursue dredging, see DEIS 1-5, as if it requires that the Corps continue dredging. This is not the case. Congress authorized dredging, but did not require it. Even if it did, this does not mean that the Corps should ignore a non-dredging alternative, at least for comparative purposes as a "no action" alternative. See 50 C.F.R. § 1502.14(c) (agency must include "reasonable alternatives not within the jurisdiction of the lead agency"). The Corps also fails to evaluate the option of breaching the four Lower Snake Dams, which would have substantial impacts on navigation, but would obviate the need for continual dredging, levee construction and the like. Restoration of the natural river hydrology is the most effective means to resolve the long term accumulation of sediment in Lower Granite Lake area and reduce flooding risks to Lewiston without continued construction of levees. Finally, the Corps fails to consider barge navigation for only part of the year. Substantial dredging could be avoided at least in part by limiting barge traffic to non-summer months, when river flows are higher. There is nothing

7

8

See 3

See 7

O-108

about Congress's authorization to facilitate barge traffic that necessitates year-round navigation, particularly where the costs to salmon are so high.[1]

9

A further example of the DEIS' myopic focus on intensive dredging is its failure to meaningfully address methods to reduce sediment input into the rivers, which would reduce substantially the need to dredge. See DEIS 2-5. In fact, the DEIS acknowledges that land use modifications would have a substantial effect on reducing sediment accumulation. Id.; see also App. F, FA-10 (NMFS "believes that if better farming and forest management practices were used upstream, dredging the confluence areas of the Snake and Clearwater Rivers would be required less often, thus reducing the environmental impacts of dredging and disposal.") This option would be beneficial for fish species by reducing harmful dredging, and by improving fish habitat and water quality elsewhere in the basin. Mysteriously, however, the Corps rejects any substantive consideration of this approach because it is not a "complete alternative." It is not clear why the Corps rejected sediment reduction simply because it would not, by itself, completely solve the problem. Certainly, this approach would reduce the need to dredge, or allow the Corps to dredge with less frequency. Even if the Corps is not a land management agency, it is not powerless to encourage land management modifications that could result in reduced sediment input. Regardless, NEPA requires consideration of reasonable alternatives like this one even if they are not within the Corps' jurisdiction. 50 C.F.R. § 1502.14(c). SOS urges the Corps to evaluate opportunities to work cooperatively with state, federal and private land owners and managers to reduce sediment input into Columbia basin streams as an alternative to continued high-impact dredging.

See 3

Another alternative the Corps should have considered is breaching Lower Granite Dam ("LGD"). LGD was designed to work in conjunction with the planned Asotin Dam above Lewiston, which would have significantly reduced the amount of sediment flowing into Lower Granite Lake. See App. A, at A-19 (Asotin Dam "would have trapped the majority of the migrating sediments on the Snake River.") For various reasons, the Asotin Dam was never built, leading to a sediment build-up problem that LGD was never engineered to handle. The Corps ignores this, and the fact that without dredging and existing levees, Lewiston probably would be flooded. Indeed, the Corps never discloses that it is likely that within the 20 year life span of this project, levees higher than three feet will be required by this continued inflow of sediment. As the DEIS recognizes, higher levees will require substantial re-engineering of roads, bridges and so on, and hence will be very expensive. Breaching LGD could significantly resolve this problem, at substantially lower cost. The Corps should evaluate this alternative.

The DEIS Ignores, Discounts, or Misrepresents A Wide Variety of Environmental Impacts

10

[1] There are other opportunities that may satisfy the Corps goal of particular channel depths besides dredging, such as the idea of "sediment pass through." The Corps should more actively seek out these kind of alternative avenues.

Associated with Dredging.

The fundamental purposes of NEPA are to guarantee that: (1) federal agencies take a "hard look" at the consequences of their actions before the actions occur by ensuring "that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts," Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989); and (2) "the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision," id. at 349; 40 C.F.R. § 1502.1 (EIS "shall" inform decision makers and public of reasonable alternatives and environmental impacts); see also Marsh v. ONRC, 490 U.S. 360, 369 (1989) ("NEPA promotes its sweeping commitment to 'prevent or eliminate damage to the environment and biosphere' by focusing Government and public attention on the environmental effects of proposed agency action.") In short, NEPA requires federal agencies to look before they leap.

To satisfy the requirement that it take a "hard look" at the environmental consequences of its actions, an agency must engage in a "reasoned evaluation of the relevant factors" to ensure that its ultimate decision is truly informed. Greenpeace Action v. Franklin, 14 F.3d 1324, 1332 (9th Cir. 1992). The DEIS must be searching, detailed and comprehensive; "[g]eneral statements about 'possible' effects and 'some risk,' do not constitute a 'hard look' absent a justification for why more definitive information could not be provided," Neighbors of Cuddy Mountain v. United States Forest Service, 137 F.3d 1372, 1380 (9th Cir. 1998). An agency's failure to include and analyze information that is important, significant, or essential renders an EIS inadequate. Without such detailed information, there is no way for the public or the agency to adequately assess the impacts of a proposed action. See California v. Belgrade, 483 F. Supp. 465, 495 (E.D. Cal. 1980), aff'd sub nom. California v. Block, 690 F.2d 753 (9th Cir. 1982) (by failing to disclose key data, "the Forest Service effectively undercut the twin goals of environmental statements: informed decision-making, and full disclosure").

It is hence of critical importance that an EIS be factually accurate and well supported. 40 C.F.R. § 1502.24 (agencies must ensure the scientific integrity of an EIS). An agency's failure to use the most up-to-date information and tools available undermines the public's confidence in the EIS and renders it legally defective. Tribal Village of Akutan v. Hodel, 869 F.2d 1185, 1192 n.1 (9th Cir. 1989) (EIS "which is incomplete due to the omission of ascertainable facts, or the inclusion of erroneous information, violates the disclosure requirement"); Seattle Audubon Soc. v. Espy, 998 F.2d 699 (9th Cir. 1993) (agency cannot rely on "stale" science or "ignore reputable scientific criticism"); Coleman, 521 F.2d at 676 (rejecting agency position that uncertainty is grounds for not disclosing potential impacts). While "perfect" knowledge is not required, the EIS at least is required to disclose data gaps and the basis for assumptions. 40 C.F.R. § 1502.22 (agency shall make clear where information is inadequate or unavailable).

O-109

11 The DEIS falls far short of these strict standards. Instead, it presents sweeping generalizations and unsupported assertions, and promises environmental benefits that are either unsupported or actively contradicted by the available science. The Columbia River Inter-Tribal Fish Commission ("CRITFC") and other entities have already raised extensive questions about both the harms and benefits of dredging and in-river disposal, questions that have not been resolved or even addressed in this document. SOS believes that dredging and in-river disposal will in fact present serious risks of harm to fish species already greatly imperiled by past river management and ongoing activities in the basin. These risks are simply not disclosed or evaluated in the DEIS.

12 For example, the DEIS largely discounts the impacts of the project to ESA-listed fish based on the premise that relatively few fish will be in the river during the time that dredging will actually occur. SOS questions whether the conclusion is correct at all: WDFW studies indicate that a large proportion of juvenile fall chinook overwinter in the Snake River reservoirs, and hence can be harmed by dredging. Dredging in the past disturbed and killed listed fall chinook alevins. Even if the numbers of affected fish are low, which SOS disputes, many salmon species are already so imperiled that harm to even a few is a matter of serious concern. The Corps may not discount or ignore harms to even a few fish simply because the bulk of the runs occur at different times of the year. See App. F, at FA-10 (NMFS believes that the possibility of entrainment of listed fish or fish eggs does exist, and is concerned about absence of monitoring plan to prevent such entrainment at dredging locations.)

13 Even if it were true that few fish are in the river during the time when dredging is proposed, the Corps ignores several important considerations. It is not at all clear that impacts will be so short-term that they will not effect fish arriving later. For example, turbidity and water quality degradation resulting from dredging and in-river disposal may have longer lasting impacts on fish and fish habitat than what is acknowledged in the DEIS. For example, the DEIS

14 does not explain how sediment plumes will not adversely impact fish habitat downstream as it settles. Similarly, as CRITFC pointed out in its comments on the EA, dredging has significant adverse effects on benthic invertebrate production that are long-lasting. In fact, studies show that original species diversity in dredged areas is seldom achieved, even for many years after activity. The DEIS ignores these impacts, which could harm imperiled fish species temporally distant from the dredging itself. Moreover, the proposed action includes a vague provision to allow dredging when fish are migrating where some undefined "emergency" requires it. The summer of 2001, in which the Bonneville Power Administration decided to violate the requirements of the 2000 BiOp because of a perceived financial "emergency" shows that such open-ended provisions can have significant impacts. Yet the DEIS provides no guidance on what situations

15 might constitute an "emergency," what steps could be taken to avoid one, and what environmental consequences can be expected follow from dredging during migration season. SOS strongly disagrees that commercial or economic harm can constitute an emergency that should permit dredging during the migration season, and asks the Corps to clarify this issue.

16 The DEIS largely dismisses the potential for dredging to stir up toxic wastes contained in sediments. SOS believes that the risks presented could be far greater than those acknowledged by the DEIS. Previous data has showed sediment samples contaminated with dioxin and petroleum products, substances that will be activated in the river during dredging. Industrial facilities like the Potlatch facility continue to pour out dioxin and many other toxics into this area. Even so, this data is incomplete and out of date: the Corps has not been able to point to any more recent tests that substantiate its contention that sediment toxicity is of no concern. Similarly, the science governing thresholds of harm has advanced significantly in recent years.
17 The Corps should provide much more detailed information, including the results of recent comprehensive sampling and core tests throughout the areas to be dredged. Moreover, the Corps should provide more detailed information on how it intends to monitor the dredging to ensure
18 that toxics "hot spots" don't cause habitat degradation. Its statement that it will "visually" inspect ongoing dredging for signs of contamination is not credible. Forthrightly addressing the toxics issue is particularly important where sediments will be used to attempt to create shallow water habitat for salmonids.

19 The DEIS assumes, without any analysis or support; that in-river disposal will create effective "habitat" for salmon and other species. While SOS supports valid salmon habitat restoration measures, we are concerned that the benefits of in-river disposal are overstated and the risks have been ignored.[2] SOS is concerned that in-river disposal is being pursued primarily for economic, not environmental, reasons. Other entities have already submitted science that seriously questions the Corps' conclusion that in-river disposal of dredged materials will provide any meaningful benefit for salmon. In-river disposal as contemplated has the potential to destroy ecological relationships, contaminate shallow areas with toxics, and increase harmful sedimentation. The DEIS fails to address these concerns or provide any other support for the Corps' conclusion that in-river disposal will benefit fish. Indeed, all of the evidence cited by the Corps comes from one of its own consultants. Before the Corps embarks upon such a risky and expensive project, more evaluation on the risks and benefits should be provided.

What is even more remarkable is that the DEIS proposes a 20 year multi-component dredging and disposal plan without explaining how the Corps intends to incorporate or deal with monitoring, adaptive management, or changed circumstances. Certainly, given how little is known about the impacts to fish and fish habitat associated with this project, some provision for
20 monitoring results and changing direction as required should be included. To the extent that the "Local Sediment Management Group" could constitute such an adaptive management mechanism, much more information on standards needs to be included to ensure careful scrutiny

[2] Evidently, SOS is not alone in this concern. See DEIS App. F, at FA-10 (NMFS Areas of Concern) ("[N]o recent studies have been conducted to determine the continued and long-term viability of these sites as beneficial to endangered salmonids.")

O-110

of results and cautious adaptation to protect natural resources. Adaptive strategies linked to monitoring could affect frequency of dredging, minimize costs, and minimize ecological impacts.

The DEIS provides one very short paragraph on the environmental impacts associated with levee construction, which is wholly inadequate. The DEIS fails to discuss potential impacts
21 to the river ecosystem associated with constraining flood waters within levees, rather than letting them spill into floodplains. It is silent on potential aquatic risks associated with construction and maintenance of these structures, which could be anticipated given their proximity to the river. SOS believes that intensive technological fixes like levees present a host of potential threats to aquatic habitat when compared to natural conditions. The Corps must do a better job of evaluating the pros and cons of relying on this kind of "techno-fix" instead of less drastic
22 alternatives. Moreover, the Corps should discuss whether levee construction is even necessary in light of the extensive and highly conservative flood control management available in the upper Snake basin. Levee construction is a very expensive tax-payer subsidy for navigation interests; the Corps should at a minimum analyze whether it is necessary at all. Finally, as noted above,
23 the DEIS fails to disclose that it is highly likely that the proposed three foot levee increase will prove inadequate during the life of this project, and that further expensive increases will be necessary.

Lastly, by the Corps' own admission, the hydrologic modeling used to determine sedimentation locations, volumes, and rates in this DEIS is inadequate. See App. A, at A-19-23. The Corps originally proposed a two-dimensional model analysis of sediment transport in the Snake and Clearwater Rivers that would have given a more accurate understanding of sedimentation issues. However, the Corps elected to discard that analysis in favor of an inferior one-dimensional model because of time constraints. Id. at A-23. Additionally, some of the studies are over a decade old, and have not been updated. Id. A-12. Given that this DEIS is essentially driven by sediment transportation issues, SOS objects to use of the one-dimensional
24 study and asks the Corps to delay implementation of a final EIS until appropriate and scientifically sophisticated modeling can be achieved.[3]

The DEIS' Discussion of Cumulative Impacts Is Inadequate

NEPA requires a cumulative impacts analysis to: (1) catalogue past projects in the area; (2) assess the cumulative environmental impacts of those projects with the proposed project; and (3) analyze the additive cumulative impact of all reasonably foreseeable Federal and non-Federal actions, whether or not they have actually been proposed. See City of Carmel-By-The-Sea v.

[3] Additionally, there is very little discussion of inflowing boundary condition, which is the dredging process in the sediment model and essential in evaluating the frequency of dredging, risks, uncertainty in model predictions, and possible range of responses in different water years.

United States Dep't of Transp., 123 F.3d 1142, 1160 (9th Cir. 1997) (rejecting cumulative impacts analysis that referred generally to other past "development projects" and did not discuss the additive impacts of foreseeable future projects); Fritiofson v. Alexander, 772 F.2d 1225, 1243 (5th Cir. 1985) (agency must consider reasonably foreseeable actions regardless of whether they have yet formally been proposed). Furthermore, NEPA requires that a cumulative impacts analysis provide "some quantified or detailed information" because "[w]ithout such information, neither courts nor the public . . . can be assured that the Forest Service provided the hard look that it is required to provide." Cuddy Mountain, 137 F.3d at 1379; Carmel-By-The-Sea, 123 F.3d at 1160 (faulting EIS for describing other projects in inadequate detail to permit review of their cumulative impacts).

The DEIS's slender section on cumulative impacts is woefully inadequate. The DEIS
25 ignores the sweeping range of direct and indirect harms faced by salmon migrating through this region of the Columbia and Snake Rivers, including poor water quality (including elevated temperatures and dissolved oxygen), inadequate flows, habitat degradation associated with land use, inadequate food supply, and upstream and downstream passage. Similarly, multiple industrial entities, such as the Potlatch paper mill in Lewiston, routinely emit toxics and other pollutants into these rivers. Taken together, conditions in the Columbia and Snake River mainstems have brought these species to the brink of extinction. Operation of the FCRPS is an exceedingly complex process governed by multiple documents and entities, including the 2000 BiOp. At times, moreover, agencies depart from BiOp requirements in order to prevent financial risks.

O-111

26 The DEIS, however, is entirely silent on hydrosystem management and this sweeping range of harms presented to migrating salmonids. Rather, it includes only other dredging activities, dam re-licensing, and "dam drawdown scenarios" in its catalogue of other actions that could result in cumulative effects. The narrow range of activities considered by the Corps in its cumulative effects analysis renders the document legally defective. Even within these extraordinarily circumscribed categories, however, the Corps fails to properly evaluate cumulative impacts. For example, on January 3, 2002, the Corps submitted a new biological assessment to NMFS covering its proposal to dredge and deepen the 103-mile stretch of the Columbia River below Portland, Oregon. On that same day, the Corps announced that it would also prepare a supplemental EIS for the project. This lower Columbia channel deepening project has yet to move forward specifically because of the adverse impacts that it would have on salmon – including many of the same stocks impacted by this dredging proposal – in the estuary. It is impossible to evaluate the cumulative impacts of dredging the Snake River without even mentioning the massive dredging project on the lower Columbia. The omissions of all of the other problems fish face in these rivers are as troubling as they are unlawful.

In this document, the Corps proposes a 20 year dredging and in-river disposal plan that, SOS believes, could have significant adverse impacts to species already seriously imperiled by a

variety of river management and habitat degrading activities. The science is quite clear that conditions need to be improved, not further degraded. Even if the risks presented by this action are small, which SOS does not agree is this case, this project could well be another insult that, cumulatively to all the others, makes recovery of these species even more difficult than it is today. It is for this reason that NEPA requires a rigorous analysis of the cumulative effects of
27 proposed action. The DEIS's cumulative effects analysis does not aid in anyone's evaluation of the risks and benefits of the various alternatives.

The Description and Comparison of Costs is Flawed

28 The DEIS fails entirely to justify the need for the project. It does not disclose the current condition of the navigation channel or describe various alternatives to continued dredging. For example, lighter barges may obviate the need for some dredging, an option which is entirely ignored in this document. While the DEIS describes the economic benefits of dredging, it fails
29 to analyze the economic impact of reduced or no dredging. Remarkably, the analysis of the economic costs and benefits turns on a simplistic choice between barging as it exists today, and no barging altogether. See DEIS 1-11. The Corps has failed to make the case that reducing or eliminating dredging will require the elimination of all, rather than some, barge traffic. SOS believes that barge traffic may be able to adapt to shallower navigation channels without undue burdens, for example by using lighter barges or limiting barging to certain times of year. The stark choice between "business as usual" and no barging at all skews the document in favor of dredging and presents a highly incomplete picture of alternatives.

The Preferred Alternative Is Poorly Defined and Risky.

After presenting four largely identical alternatives, discounting most of their risks, and overstating potential environmental benefits, the Corps chooses Alternative 4 as its preferred alternative. As noted, Alt. 4 is virtually indistinguishable from the other three, with the exception that it provides a flexible (and largely undefined) mechanism for disposal options.
30 While SOS is not necessarily opposed to a flexible or adaptive process for making disposal determinations, the Corps has failed to provide any guidance, restrictions or standards for making these determinations. Rather, an *ad hoc* working group will make decisions on disposal as opportunities arise. Under the preferred alternative, this group will have virtually uncabined discretion on where and how to make disposal decisions and what standards should apply. It is quite speculative that the Corps will solicit sufficient interest in using dredge spoils for fill or other uses, leading to the conclusion that this is highly likely to result in high levels of in-river disposal. Clearly, the DEIS cannot properly evaluate and analyze risks when the proposed action is so poorly defined and the outcomes so speculative. SOS urges the Corps to provide greater detail and governing standards on how disposal decisions are to be made. SOS also urges the
31 Corps to consult with and to include the public, including conservation, fishing and tribal groups, when making disposal decisions. These individual decisions must be the subject of site-specific

NEPA analysis and ESA consultation.

The DEIS Misstates the Purpose and Need

The DEIS defines the purpose and need for the proposed action with three components: a) to develop and evaluate "alternative programs" to maintain the navigation channel in the Lower Snake River and McNary Reservoir; b) to develop and evaluate alternative measures to maintain the flow conveyance of Lower Granite reservoir through 2074; and c) to develop and evaluate alternative programs of managing dredged materials. DEIS at 1-2. Leaving aside the question of whether or not the Corps has succeeded in presenting programs that are "alternative" to one another in any meaningful way, SOS believes that the entire purpose and need is far too narrowly defined.

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As noted above, Congressional authorization to maintain a navigation channel to a certain depth is not to be confused with a requirement that the Corps do so. In fact, as the Corps is well aware, it is under multiple legal obligations to manage the river in certain ways, some of which may conflict with one another. The ESA's mandate that the Corps take no action that will jeopardize listed species or adversely modify critical habitat is unambiguous, and in SOS's view, requires that the Corps pursue dam breach scenarios. Given that, the purpose and need for this DEIS should be focused more broadly on transportation of products from Lewiston downstream. Barge navigation is not an end in itself, but rather a means of shipping various products, primarily grain exports, to and from Lewiston. There are multiple different ways to transport products that don't require the full navigation channel, or even any barge navigation at all. This DEIS should evaluate the relative merits, costs, and environmental risks presented by different transportation regimes, including barge navigation, so that Congress and the public can have a complete picture of the situation.

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Dam Management To Protect Fish and Dredging Are Inextricably Connected Actions and Hence Should Be Considered in a Single EIS.

This DEIS, at its heart, involves management of the Lower Snake River to allow barge navigation. According to the DEIS, dredging and levee construction are the only available alternatives to address the problems of sediment build up associated with river management and dam operations. The choice presented, however, is a false one. As discussed above, dredging would not be required if dam breach was considered as an alternative. The DEIS assumes that dam breach is not an option and hence fails to consider it. But the document on which this assumption is presumably predicated, the December 1999 Draft Lower Snake Salmon Migration Feasibility Report/Environmental Impact Statement ("Migration DEIS"), is completely silent on the environmental impacts and economic costs associated with dredging. Both the Dredging DEIS and the Migration DEIS involve the exact same issue: how to manage the Lower Snake River dams in such a way to comply with various laws and to minimize impacts to imperiled

O-112

34

salmonids. However, the Corps has chosen to divorce dam management from dredging and contemplate them in two separate NEPA documents, each of which ignores the issues raised in the other. This is contrary to common sense and violates NEPA.

The law is quite clear that actions which are connected or cumulative to one another must be considered in the same NEPA document. See 40 C.F.R. § 1508.25. CEQ regulations dictate that "connected" actions "should be discussed in the same impact statement. Actions are connected if they: (i) automatically trigger other actions which may require environmental impact statements; (ii) cannot or will not proceed unless other actions are taken previously or simultaneously; (iii) are interdependent parts of a larger action and depend on the larger action for their justification." Id. at § 1508.25(a)(1); see also id. at § 1508.25(a)(2) ("cumulative actions [are those that] when viewed with other proposed actions have cumulatively significant impacts . . . [and hence] should therefore be discussed in the same impact statement.") According to the Ninth Circuit, "connected or cumulative actions must be considered together to prevent an agency from 'dividing a project into multiple actions, each of which individually has an insignificant environmental impact, but which collectively have a substantial impact." Wetlands Action Network v. U.S. Corps of Engineers, 222 F.3d 1105, 1118 (9th Cir. 2000), citing Thomas v. Peterson, 753 F.2d at 758 (Forest Service violated NEPA by contemplating road project and timber sale in separate NEPA documents). The Ninth Circuit uses an "independent utility" test to determine whether an agency is required to consider multiple actions in a single NEPA document. In Thomas, the court found that the timber sales could not proceed without the road, and the road would not be built but for the timber sales, and hence, the two were required to be considered together. See also Save the Yaak Committee v. Block, 840 F.2d 714, 720 (9th Cir. 1988) (same); In Northwest Resource Information Center v. NMFS, 56 F.3d 1060 (9th Cir. 1995), by contrast, the Court found that the agency was not required to consider transportation program and flow improvements in same EIS because each one could continue usefully without the other.

This situation clearly raises an issue of connected actions. Ongoing dam management as governed by the Migration DEIS is inextricably related to the dredging, "habitat creation" and levee building contemplated in the Dredging DEIS. Indeed, without continued dredging, management of the dams as discussed in the Migration DEIS would become virtually impossible. Continued sediment build up would prevent navigation and drastically alter flow patterns through the dams. Similarly, the dredging and levee construction, as well as mitigation measures like habitat "creation," would not be required if the dams were breached. Clearly, dam management "cannot or will not proceed unless other actions [namely, dredging] are taken" concurrently. 40 C.F.R. § 1508.25(a)(1)(ii). Similarly, dredging is an "interdependent part of a larger action [namely, dam management] and depend[s] on the larger action for [its] justification." Id. 1508.25(a)(1)(iii). Thus, this situation is analogous to Thomas and Save the Yaak Committee, and quite different from Northwest Resource Information Center, where the two actions in question could each proceed independently to good effect. Accordingly, the Corps

has violated NEPA by considering them separately.

What is even more remarkable is that the Migration DEIS it totally silent on the issues raised in the dredging DEIS. While the Migration DEIS purports to fully evaluate the costs and benefits of dam breaching relative to other dam management scenarios, it fails to mention the costs and environmental risks presented by continued ongoing dredging activities required by a no-breach decision. This is true despite extensive discussion of navigation issues as well as the environmental risks presented by sedimentation, turbidity and toxics. See, e.g., Migration DEIS at 4.2-3 (erosion and sedimentation); 2-18 (navigation); 4.4-14 (sediment and turbidity); Ch. 4.9 (discussing transportation and navigation without mention of dredging); 5.13-6 (no mention of dredging in employment section). In fact, the Corps goes so far as to raise numerous concerns
35 about sedimentation/turbidity issues associated with dam breach, but then ignores the same issues altogether insofar as they relate to the dredging that is necessary in the absence of breach. See id. 5.3-2 through 6. Given the risks and costs associated with perpetual, ongoing dredging described above, it is stunning that the Migration DEIS pretends that they do not exist. Although the comment period on the Migration DEIS has closed and the Corps has announced a preferred alternative, its failure to consider this important issue in the final EIS will render it
36 fatal. Accordingly, SOS requests that the Corps take the time to address the costs and environmental risks associated with dredging in the final Migration DEIS before a ROD is finalized.

O-113

The Corps Has Failed to Comply With § 404 of the Clean Water Act.

The Corps' flawed NEPA analysis also infects its responsibilities to comply with the Clean Water Act ("CWA"). Like NEPA, the CWA requires that, before proceeding with projects affecting water of the United States, the Corps conduct an analysis of the project's potential impacts. The CWA seeks to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). One mechanism through which it serves these ends is by prohibiting the discharge of pollutants into navigable waters without a § 404 permit. 33 U.S.C. § 1344(a). Nowhere in the DEIS does the Corps discuss its intention to obtain a section 404 permit for the proposed dredging or levee construction discussed in this DEIS. SOS believes that such a permit is required. To comply with CWA § 404 for these activities, however, the Corps must conduct a "public interest review" in which, among other things, "the decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest." 33 C.F.R. § 320.4(a)(1). This public interest review also requires that "[t]he benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments." Id. Thus, just like NEPA, the CWA requires the Corps
37 to conduct a comprehensive analysis of the impacts of dredging and levee construction before those projects may proceed. The Corps' failure to do so in this EIS therefore not only violates NEPA, but also the CWA.. See Sierra Club v. Sieler, 695 F.2d 957, 983 (5th Cir. 1983) (finding

that Corps' "skewed" NEPA analysis "tainted the [Corps'] permit decision-making process" by preventing the "careful weighing of all [relevant] factors" required by the public interest review); Van Abbema v. Fornell, 807 F.2d 633, 643 (7th Cir. 1986) (Corps' reliance upon NEPA analysis's inaccurate economic information rendered CWA public interest review similarly invalid). Only with knowledge in hand can the agency determine what best serves the public interest. This EIS does precisely the opposite.

In addition to having to analyze the effects of its proposed projects pursuant to NEPA and
38 its CWA regulations, the Corps must evaluate impacts pursuant to EPA's § 404(b)(1) guidelines, 40 C.F.R. § 230.[4] These guidelines require, among many other things, the Corps to determine that an action will not "cause or contribute to significant degradation of the waters of the United States." 40 C.F.R. § 230.10(c). This finding must be "based upon factual determinations, evaluations, and tests." Id. Because its NEPA analysis fails to adequately consider many of the same factors in the 404(b)(1) guidelines (see, e.g., 40 C.F.R. § 230.11(g), which requires an evaluation of cumulative impacts), SOS is deeply concerned that the Corps § 404(b)(1) analysis will suffer from the same deficiencies. See Friends of the Earth v. Hall, 693 F. Supp. 904, 946 (W.D. Wash. 1988) (gaps in data and scientific uncertainty in Corps' NEPA analysis fatally undermined its conclusion under § 404(b) guidelines that project would not "cause significant degradation"). However, because the Corps has not made this important analysis available for public review when the DEIS was issued, SOS reserves the right to offer comment on that
39 document when it is released and hereby incorporates its comments on that document here. Regardless of the flaws in its NEPA analysis, SOS urges the Corps to conduct its § 404(b)(1) analysis to include the rigorous evaluation required by the CWA so that the public and the decisionmaker may evaluate the Corps' proposal based on a full and accurate accounting of its impacts.

Endangered Species Act Issues

SOS appreciates the inclusion of the Biological Assessment ("BA") with the DEIS, but we believe that the BA fails to provide an adequate basis for meaningful consultation with the NMFS, violating the ESA and its implementing regulations. SOS will closely scrutinize the resulting biological opinion ("BiOp") to ensure that it is consistent with existing documentation and the best science.

[4] The Corps may not issue any permit for a discharge that does not comply with these guidelines. 33 C.F.R. § 320.4(a)(1); Friends of the Earth v. Hintz, 800 F.2d 822, 830 (9th Cir. 1986) ("The Section 404 permit process is governed simultaneously by Corps regulations, 33 C.F.R. Parts 320-29, and by EPA guidelines, 40 C.F.R. Part 230. Both sets of rules must be observed."). Thus, the duty to comply with the 404(b)(1) guidelines is distinct from the Corps' public interest review under 33 U.S.C. § 230.

40 Section 7 of the ESA requires any federal agency undertaking an action that may affect listed salmon or steelhead to consult with NMFS. 16 U.S.C. § 1536(a)(2). The presence of multiple species listed under the ESA has necessitated the initiation of consultation through the preparation of the BA that accompanies this DEIS. The ESA mandates that the BA "shall evaluate the potential effects of the action on listed and proposed species and designated and proposed critical habitat and determine whether any such species or habitat are likely to be adversely affected by the action." 50 C.F.R. § 402.12(a). See also 16 U.S.C. § 1536(c). This proposed action would undoubtedly affect numerous listed salmonids, which triggers formal consultation with NMFS.

A BA provides the foundation for consultation and should supply NMFS with enough background data to enable NMFS to use the information in the BA, together with other relevant information, to formulate a BiOp on the proposed agency action. Unfortunately, the poor analysis of the actions proposed, the conclusory statements, and lack of a cumulative effects inquiry in this BA fall far short of the ESA's requirements for biological assessments. The BA is largely a regurgitation of the DEIS, with no additional analysis of the potential impacts to listed salmonids. Unfortunately, just like the cursory analysis in the DEIS, the BA suffers from the same flaws discussed above.

O-114

The BA roughly sketches some effects of the proposed project on listed salmonids, but fails to discuss any detail on those effects or their long-term implications. In addition, the
41 baseline of the current habitat for listed salmonids in the project area is not discussed. A thorough discussion of the impacts of current management practices is a necessary and useful starting point for an adequate BA. That discussion is missing from the BA but, standing alone, would not satisfy the more crucial requirement that a BA "evaluate the potential effects of the action." 50 C.F.R. § 402.12(a). To be meaningful or useful to NMFS and to the public, the BA must fully evaluate all of the effects of current management and the potential effects of proposed alternative actions.

In addition to these procedural flaws, the DEIS and the BA fail to fully address the
42 degradation of critical habitat associated with dredging. Section 7 of the ESA prohibits any federal action that will "result in the destruction or adverse modification of" critical habitat. The portion of the Snake and Columbia Rivers affected by this project have been designated as critical habitat for several ESA-listed salmonids. The BA largely dismisses critical habitat considerations, however, simply because listed species will (for the most part) not be present in the area during dredging. See App. F, F-34. The presence or absence of listed species, however, is hardly the only relevant factor to consider in a critical habitat analysis.[5] NMFS regulations

[5] Indeed, as described above, it is not even the most relevant consideration for determining effects to the listed species themselves. There are any number of ways in which the dredging will directly and indirectly impact fish that are ignored in this section.

require that this analysis focus on whether the activity will result in "a direct or indirect alteration that appreciably diminishes the value of the critical habitat for both the survival and recovery of a listed species." 50 C.F.R. § 402.02. A proper analysis must focus on the value of the critical habitat for future use in the recovery of the species, not – as the BA does here – solely on whether listed species currently utilize the habitat, or will be present when the action takes
43 place.[6] Further, there is a dearth of analysis on the over-wintering of sub-yearling fall chinook in the impacted area or fall chinook spawning in the tailraces that will be dredged. Similarly, the BA dismisses the impacts of toxic contamination to the critical habitat by asserting that it will
See 18 take steps to test sediments when they are "visually contaminated." Id. at F-33. The Corps does not explain how it will conduct this visual survey or what standards will apply.

Consistency with Other Salmon Recovery Documents

When the Corps' DEIS is viewed in the context of recent documents that serve as a basis for salmon recovery in the Columbia Basin, it becomes apparent that this document minimizes or
44 ignores much of the guidance outlined in these documents. This is especially clear in respect to the Federal Caucus' document, Conservation of Columbia Basin: Salmon Recovery Strategy.

The overall premise of the Salmon Recovery Strategy states that "[i]t is time for citizens, governments, and special interests in the Columbia River Basin to collectively take immediate and sustainable actions to rebuild the health of the Basin" (Executive Summary, 12). The DEIS ignores the issue of sustainability. This is particularly true in respect to the Corps' plan for the "Beneficial Use" of dredged materials for the purpose of creation of shallow water rearing habitat.

The Salmon Recovery Strategy emphasizes that there is a great need for information concerning mainstem habitat projects. Included is the need to identify responses of habitat improvements in large rivers-especially the Columbia River Basin-to determine the relationship of the size of improvement to the size of impact on the environment (Salmon Recover Strategy, Vol. II, 21). To achieve these informational needs the plan calls for "rigorous monitoring and evaluation action plans that may lead to changes in . . . identification of cause and effect relationships." (Vol. II, 21) The existence of such uncertainties does not excuse poorly assessed projects but, as explicitly stated in the Strategy, the "ongoing uncertainties simply emphasize the importance of accountability, monitoring, and evaluation." (Ex. Summary, 5).

See 20 The proposed action for "beneficial use" as described in the DEIS does not incorporate this form of monitoring and evaluation with respect to the impact of the proposed project upon

[6] In any event, the BA focuses exclusively on whether or not fish will be disturbed by "dredged material removal action." Id. at F-34. The Corps does not inquire whether the habitat will be degraded by disposal of dredging spoils in the river.

salmon and the environment. The Corps takes care to address monitoring of the engineering integrity of this project but largely ignores scientific credibility by foregoing actions to initiate the rigorous monitoring and interagency approach as mandated by the Recovery Strategy.

The Corps continues to insist on proceeding with a large-scale habitat project in an area of special informational needs, and many unknowns, without utilizing a scientifically credible process. The result of not having a scientifically rigorous, coordinated effort is clearly described in the Strategy. This lack of adherence "will not only render any monitoring program useless, but will also undercut the importance of the management actions themselves." (Vol. I, 55)

Conclusion

The Corps' recent announcement that it will not pursue breaching the lower Snake dams at this time did not contemplate many of the issues raised in this DEIS: the monetary expense and environmental consequences of continually maintaining a navigation channel, ever higher levees, and the fact that LGD is not engineered to accommodate the influx of sediment without Asotin Dam. While this DEIS and decision process presents an opportunity for consideration of dam breach or other non-dredging alternatives, the Corps failed to take the opportunity. Instead, it presents a legally flawed and factually unsupported justification for an expensive, long-term program to continue a "business as usual" approach to river management. Instead of moving closer to a normative, natural river ecosystem, as called for in the 2000 BiOp, the Corps continues to propose actions that degrade it. SOS urges the Corps to take a broader view of its legal responsibilities by giving adequate consideration to non-dredging alternatives and by properly disclosing the full costs, ecological and monetary, of its proposed action.

If you have any questions about these comments, or would like to discuss any matter discussed in these comments, please contact Jan Hasselman, staff counsel with National Wildlife Federation, at (206) 285-8707 ext. 105.

Sincerely,

/s/

Pat Ford, Save Our Wild Salmon
Jan Hasselman, National Wildlife Federation
Bill Sedivy, Idaho Rivers United
Rob Masonis, American Rivers
Jeff Curtis, Trout Unlimited
Bill Arthur, Sierra Club
Lovenia Warren, Salmon for All
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O-115

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O-116

November 13, 2000

Sandy Simmons
Walla Walla District
Corps of Engineers
Environmental Compliance Section
201 N. Third Ave.
Walla Walla, Washington 99362-1876

Dear Ms. Simmons:

This letter is written by the Save Our Wild Salmon coalition (SOS) and its undersigned member organizations in order to comment on the Environmental Assessment: Interim Lower Snake, Clearwater, and Mid-Columbia Rivers Dredging (EA) prepared by the US Army Corps of Engineers (Corps) and released to the public October 13, 2000. The EA analyzes actions to be taken by the Corps to dredge the Snake and Clearwater Rivers and determines compliance with the National Environmental Policy Act (NEPA).

With a combined individual membership of 6,000,000, SOS is a coalition of more than 50 sport fishing, commercial fishing, and conservation organizations – local, regional, and national – which seek restoration of salmon stocks throughout the Pacific Northwest to sustainably harvestable numbers. SOS appreciates this opportunity to comment on the Corps' EA. The Columbia River Inter-tribal Fish Commission and the Nez Perce Tribe are also on the EA submitting SOS hereby incorporates those comments by reference.

Introduction

The science and politics that surround these four dams on the lower Snake River require a wholly different approach to this process. The science clearly supports that removal of these four dams is a necessary part of any plan to restore the endangered salmonids that call the Snake and Clearwater Rivers home. At this point, the determination that these dams will remain in place for the long-term has yet to be made. The National Marine Fisheries Service (NMFS) is in the process of completing its Biological Opinion for the Operation of the Federal Columbia River Power System. That analysis may conclude that the dams remain on a probationary status, waiting to determine whether other measures can recover endangered salmon. In the meantime, a hastily written EA and Biological Assessment (BA) will not suffice to protect these fish from the affects of dredging.

The Corps is authorized to provide for navigation on the Snake River, the purpose of most of this project. That purpose was supported by no justification for this project in the EA. It does state that the channel is currently at ten feet, with fourteen feet being optimal for navigation. There is no identification or discussion of what impacts, if any, the current depth has on barge traffic, what difficulties this may cause, nor any economic effects to upstream ports. Simply because a fourteen foot channel is optimal does not mean that it is necessary. It would seem prudent to delay any dredging while the future of the four dams on the lower Snake River is debated, as this proposal may cause unnecessary harm to listed salmonids.

The Corps has chosen its preferred alternative in this EA based in large measure on cost. Other disposal methods were deemed too costly, given the Corps limited budget.[1] The Corps can not discount certain options based solely on cost; if two alternatives have equal costs and benefits, only then can one be chosen based on cost alone. The EA discounts option (c) as being too costly, without considering whether or not it would be more beneficial to listed salmonids.

It is unclear whether the cost of dredging the Snake and Clearwater Rivers, which is no doubt related to dam retention, was included in the maintenance costs in the Corps' Draft Lower Snake River Juvenile Salmon Migration Feasibility Report/Environmental Impact Statement (Draft EIS). (Appendix I, sect. 3.8.5). The costs of dredging must be included in that EIS process, and those costs must be the same as those estimated in this EA.

Specific comments relating to the EA, Biological Assessment (BA), and water quality are below.

The Dredging Proposal Requires Preparation Of An EIS

The National Environmental Policy Act ("NEPA") requires federal agencies to prepare an environmental impact statement ("EIS") for any "proposals for . . . major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). The Corps' dredging proposal, which involves, among other things: (1) moving more than 500,000 cubic yards of dredge material; (2) dredging over a 2-year time frame; and (3) the federal expenditure of approximately $1.8 million certainly qualifies as such an action.

The Council on Environmental Quality's ("CEQ") NEPA regulations provide that the following factors must be considered when determining whether a federal action will significantly impact the environment: (1) the uniqueness of the affected area or resource; (2) the likelihood that the proposed action will be highly controversial; (3) the degree to which the proposed action may set a precedent for future actions with significant impacts; and (4) whether the action threatens a violation of federal, state, or local environmental law. 40 C.F.R. § 1508.27. An analysis of these factors demonstrates that an EIS must be prepared for dredging plan because: (1) the proposal will affect imperiled salmon and steelhead in one of the most heavily impacted/altered rivers in the basin; (2) the effects of dredging and associated habitat alterations on salmon populations has

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[1] In the Corps' analysis of the socio-economic effects of the proposed dredging, there is no analysis of the costs to the fishing communities for going ahead with this project. Section 4.g at p.51. A complete analysis would include affects to both local sportfishing and down river commercial fishing communities.

been the subject of sustained controversy in the scientific community, in the courts, and in the media for many years; (3) the proposal is very likely to set a precedent for the final shape of the long-term plan; and (4) the proposal clearly threatens to violate federal environmental law, such as the Endangered Species Act ("ESA") and the Clean Water Act ("CWA"), discussed in more detail below. Indeed, the proposal for dredging is very similar to actions considered and that would be taken as part of the long-term dredged material management plan. Under these circumstances, the Corps must prepare a full-blown EIS before it can proceed with this project.

NEPA Prohibits the Dredging while Completing EIS

The Corps has explicitly recognized that maintenance dredging in the Columbia/Snake River system is a major federal action for which an EIS must be prepared and have actually been working on an EIS for that action. Rather than being independent from the plan being assessed in the EIS, however, the Corps has prepared an EA whose sole purpose is to allow the Corps to complete the very activity that it is analyzing in the EIS pending the completion of that EIS. While perhaps convenient for the Corps, moving forward with just such an interim proposal is anticipated and explicitly barred by NEPA's implementing regulations, which provide that:

> (c) While work on a required environmental impact statement is in progress and the action is not covered by an existing program statement, agencies shall not undertake in the interim any major Federal action covered by the program which may significantly affect the quality of the human environment unless such action:
>
> (1) Is justified independently of the program;
>
> (2) Is itself accompanied by an adequate environmental impact statement; and
>
> (3) Will not prejudice the ultimate decision on the program. Interim action prejudices the ultimate decision on the program when it tends to determine subsequent development or limit alternatives.

40 C.F.R. § 1506.1(c). The proposal analyzed in the EA violates the plain language of these regulations. As discussed above, the dredging is a major federal action significantly affecting the human environment. Indeed, there is nothing to distinguish this project from the activities evaluated in the EIS, and thus there can be no basis to conclude that this project is any less a "major federal action significantly affecting the quality of the human environment" than the activities evaluated in the EIS. It therefore falls within the purview of 40 C.F.R. § 1506.1(c). The EA fails each of the tests required by this regulation, the failure of any one of which renders proceeding with the action without an EIS illegal.

First, the "interim" dredging proposal is not justified independently of the EIS. The EA admits, as it must, that the project will be covered by the final maintenance dredging EIS. As the Corps admits throughout the EA, this project "is the latest in a continuing series of dredging operations to maintain navigation, port, and recreational use of the lower Snake, Clearwater, and Columbia Rivers." Section 4.d.5 at p.46. The project has been proposed only "[b]ecause the Corps needs to dredge prior to 2001 to meet its obligations for navigation channel maintenance, recreation, and wildlife management" and the EIS will not be completed in time. Section 2 at p.3.

O-117

That the proposal evaluated in the EA does not have an independent justification is most obvious from the fact that it is merely a modified version of what is likely to be the preferred alternative in the EIS. Indeed, the EA and the long-term EIS stem from precisely the same issues and strive to achieve precisely the same ends, albeit for different periods of time – both are similar in purpose, need, and scope. For example, Alternative 2 of the Draft long-term EIS is identical to that action proposed here. See Draft EIS at Table 2-4. Even Alternative 4, the Draft EIS' "Preferred Alternative," parallels the EA in that it includes substantially identical elements of the proposal evaluated in the EA. See Draft EIS at 2-47 (describing in-water disposal to create shallow-water habitat identical to that proposed in the EA). Clearly, there is no different justification for the adoption of the interim proposal than for the nearly identical preferred alternative likely to be offered by the long-term EIS. Rather than being "justified independently of the program," the dredging stems from precisely the same motivations as does the potential long-term EIS. Indeed, given that the actions provided for in the EA are very similar to those outlined for the long-term dredging plan, it is likely that the actions proposed by the EA would, in effect, be the first year's implementation of the long-term dredging plan.

Second, and most obviously, the EA runs afoul of 40 C.F. R. § 1506.1(c)(2) because the Corps has not prepared an EIS for the interim dredging. This NEPA regulation makes absolutely clear that the mere fact that an interim proposal will be superseded by a more long-term action in the future does not excuse defendants from preparing a full EIS when, as is true here, the interim proposal is a major federal action in its own right.

Third, the Corps' EA violates 40 C.F.R. § 1506.1(c)(3) because the implementation of the interim proposal will prejudice the ultimate decision on the program by tending to determine the development and outcome of the long-term plan. As discussed above, the proposed dredging amounts to little more than the first year of the long-term plan. Because the long-term plan contains many of the elements contained in the proposal analyzed in the EA, it is difficult to see the interim dredging proposal as anything more than a proving ground for methods that may be used in the long-term plan.

In sum, the Corps' proposal amounts to the premature implementation of alternatives that have not yet been fully disclosed and analyzed through NEPA's EIS process. NEPA's regulations, and the policy underlying the statute itself, were intended to prevent such actions from moving forward before they were fully analyzed in an EIS. SOS urges the agency to heed the policy, purpose, and plain language of the statute and prepare an EIS for the interim dredging proposal.

The EA Does Not Present Sufficient Information Or Evidence To Determine Whether The Project Will "Significantly Affect The Quality Of The Human Environment."

The fundamental purposes of NEPA, are to guarantee that: (1) federal agencies take a "hard look" at the consequences of their actions before the actions occur by ensuring "that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts," Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989); and (2) "the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of

that decision," *Id.* at 349. In short, NEPA requires federal agencies to look before they leap. Unfortunately, the EA fails to serve this critical function.

An agency's failure to include and analyze information that is important, significant, or essential renders an EIS or an EA inadequate – for, without such detailed information, there is no way for the public or the agency to adequately assess the impacts of a proposed action. See California v. Bergland, 483 F. Supp. 465, 495 (E.D. Cal. 1980), aff'd sub nom. California v. Block, 690 F.2d 753 (9th Cir. 1982) (by failing to disclose key data, "the Forest Service effectively undercut the twin goals of environmental statements: informed decisionmaking, and full disclosure").

See 16, 17, 37 & 38

A complete accounting of the water quality impacts resulting from the removal and displacement of sediment during dredging and disposal is not presented in the EA. The dredge material is known to contain several types of pollutants including high nutrient levels; small amounts of herbicides, pesticides and dioxin; some heavy metals and the sediments themselves. Stirring up these pollutants will influence certain water quality attributes such as the chemistry and clarity, with subsequent impacts to aquatic organisms. Specifically, this action will impact water quality by increasing turbidity, and potentially altering dissolved oxygen, temperature and pH. A comprehensive analysis of these potential water quality impacts must be conducted before the Corps can conclude that water quality impacts will not occur.

See 40

O-118

The Corp states that "the proposed action is not likely to adversely affect individuals of the listed salmon stocks" without providing clear and scientifically supported criteria. Section 404(b)(1) Evaluation, at p.11. The volume of relocated sediment (approximately 244,269 cubic yards in 2000-2001 (Section 2 at p.5)), caused by the dredging is of particular concern. The lower Snake River has a large sediment load that would be exacerbated by the dredging through resuspension of sediments into the water column. Increased sediment has particularly harmful habitat impacts, and negatively affects all life cycles of fish. Sediment deposition causes an increase in cobble embeddedeness, which degrades habitat quality. Sediment is also harmful to fry and juvenile fish. Fine sediment causes gill irritation and metabolic stress, and can reduce the growth rate of juveniles. Sediment can also affect fish downstream and even system-wide.

The Corps has not provided data on the presence of fall chinook and steelhead adult, juvenile, and fry life stages from the period of December 15, 2000 through March 1, 2001. Even if few threatened salmonids are present at the time of the scheduled dredging, it is important that they not be harmed. Disturbances to ESA listed species and habitat alteration resulting from the actual dredging would be in violation of ESA, which prohibits harassment of ESA listed species and destruction of critical habitat. Furthermore, if the dredging activities continue into late March, potential impacts to out migrants of salmon and steelhead may occur.

The Corps may not, as it has done throughout this EA, ignore relevant studies and rely upon conclusory statements and unsupported assertions to satisfy NEPA's "hard look" requirement. SOS believes that these deficiencies present an inaccurate picture of the impacts of the proposal discussed in the EA to the public, making it impossible for anyone, including the Corps, to draw any reasoned conclusions about the environmental impacts of the proposal, much less to decide whether it will significantly affect the human environment and will require preparation of an EIS.

The EA Fails To Analyze the Cumulative Impacts of Other Actions That Affect Snake River Salmon And Steelhead.

See 25, 26 & 27

Perhaps the most glaring omission in the EA is the Corps' wholesale failure to consider cumulative impacts in its analysis. The short, 2-paragraph discussion of cumulative impacts hardly satisfies the duty that the Corps take a hard look at the impacts of the interim dredging proposal. See Section 4.h at p.53. In order to ensure that the combined effects of separate activities do not escape consideration, NEPA requires that federal agencies consider cumulative environmental impacts in their environmental analyses. A cumulative impact is:

> the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 C.F.R. § 1508.7

The EA falls far short of satisfying a single one of these requirements. For example, the Corps vaguely alludes to, but nowhere describes in any detail, dredging that may occur in 2001-2002. See, e.g., Section 2 at p.3; Section 3.d.2 at p.11; Section 4.a.2 at p.16. Nowhere, however, does the EA attempt to discuss the cumulative impacts of these activities. In addition, the Corps has recently analyzed a project to deepen the Lower Columbia River -- an action that, if approved, will impact Snake River juvenile and adult salmon and steelhead as they migrate through the lowest reach of the Columbia River in many of the same ways as this proposal. Despite the similarities between this project and the proposal evaluated in the EA – let alone the fact that the Lower Columbia project has been analyzed and is therefore clearly "reasonably foreseeable" – the EA does not mention this massive project, let alone analyze its impacts in conjunction with the proposed action.

These examples are by no means exclusive. There are numerous other, easily identifiable actions and conditions that impact Snake River stocks, including, but not limited to: continuing habitat destruction and modification from on-going and proposed land-management activities; Snake River Basin water rights adjudication; and upstream water releases to protect resident fish. All of these activities and factors -- whether they be in the development stage, or completed projects – must be considered in the Corps' cumulative effects analysis. There is no way for the Corps to take a "hard look" at the environmental consequences of the proposal, without considering these types of cumulative impacts. The absence of any meaningful cumulative effects analysis in the EA demands that the Corps prepare an EIS for this project.

NEPA "emphasize[s] the importance of coherent and comprehensive up-front environmental analysis to ensure informed decision making to the end that 'the agency will not act on incomplete information, only to regret its decision after it is too late to correct'." Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1216 (9th Cir. 1998). The EA's perfunctory and incomplete discussion of cumulative effects fails to satisfy fundamental requirement. The EA's failure to analyze all past, present, and reasonably foreseeable future actions results in a

skewed, and ultimately inaccurate picture of the impacts of the proposed actions, leading to the kind of "blinders-on" decision-making that NEPA is designed to prevent.

The EA fails To Consider an Adequate Range Of Alternatives

NEPA, §101(2)(C)(iii), requires that an EA contain a discussion of the "alternatives to the proposed action." The discussion of alternatives is at "the heart" of the NEPA process. 40 C.F.R. §1502.14. The CEQ regulations require the agency to "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. §1502.14(a). However, while the agency need not consider "every device and thought conceivable by the mind of man," an agency is not free to ignore "an appropriate range of alternatives." Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 551 (1978). Resources Limited v. Robertson, 35 F.3d 1300, 1307 (9th Cir. 1993). The failure to consider all reasonable alternatives is fatal to the adequacy of an agency's NEPA analysis. Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992). ("The existence of a viable, but unexamined alternative renders an environmental impact statement inadequate.")

Stripping away the alternatives given only brief consideration in the EA, the Corps analyzes only two alternatives to dredging: the proposed action and "no action." Such a narrow range of alternatives does not fulfill NEPA's mandate to rigorously explore alternatives. For example, the Court in Commonwealth of Massachusetts v. Clark, 594 F.Supp. 1373 (D. Mass. 1984), found that the Department of Interior had not considered an adequate range of alternatives in its analysis of an offshore oil drilling proposal. Of the thirteen alternatives presented in the document, the court found that, "once the illegal and overlapping alternatives are removed from the FEIS, the Secretary was presented with basically only two different configurations for the sale... the FEIS is hopelessly skewed in favor of only small deletions from the propos[ed action]." Id. at 1380.

O-119

See 11

The EA's failure to consider a reasonable range of alternatives is even more troubling in light of the fact that many alternatives clearly exist. For example, even the "no action" alternative is given short shrift in the EA. Citing the need for the Corps to provide for navigation, the EA dismisses summarily the possibility of waiting to dredge until the completion of the long-term EIS (the "No Action" alternative). Section 3.a. There is no discussion of whether, or to what extent, the navigation channel does not provide for navigation. Indeed, the Corps tacitly admits that navigation could continue even without dredging, conceding that "[b]arge operators would possibly lighten their loads to prevent grounding." Section 3.a. While perhaps not the preferred economic alternative for barge operators, consideration of an alternative that includes reconfiguration of barging routes or timing for shipping during periods of higher flows clearly merits further consideration where, as here, the proposed activity will impact several endangered and threatened species. Consideration of such an alternative is especially necessary in light of the fact that the Corps has not produced a final EIS for partial dam removal, an alternative that, if approved, would render dredging unnecessary and costly. SOS strongly urges the Corps to explore this and all alternatives in further detail in an EIS.

Clean Water Act

The Proposal Does Not Satisfy 404(b)(1) guidelines.

See 38, 39 & 40

The same deficiencies present in the Corps' NEPA analysis also infect the agency's 404(b)(1) analysis. In addition to having to analyze the cumulative effects of its permitting decisions pursuant to NEPA and the CWA, the Corps must evaluate cumulative impacts pursuant to EPA's § 404(b)(1) guidelines, 40 C.F.R. § 230. These guidelines require the Corps to determine that a § 404 permit will not "cause or contribute to significant degradation of the waters of the United States." 40 C.F.R. § 230.10(c). This finding must be "based upon factual determinations, evaluations, and tests." Id. In making this required determination, the Corps must consider the "cumulative effects on the aquatic ecosystem," which are defined as:

> The changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material. Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems.

40 C.F.R. § 230.11(g)(1). In carrying out this analysis, the Corps must predict the cumulative impacts "to the extent reasonable and practical." 40 C.F.R. § 230.11(g)(2).

The EA contains no such analysis. Mirroring its inadequate assessment of cumulative impacts under NEPA, the Corps glosses over this requirement with one sentence, concluding, without providing any supporting evidence, that "[n]o cumulative effects have been identified or anticipated." App. A at 2.(F)(3)(h). Such perfunctory analysis falls far short of the analysis contemplated by 40 C.F.R. § 230.11(g).

The Proposal Does Not Comply With Washington State Water Quality Standards

40 C.F.R. § 230.10(b)(1) prohibits any discharge of dredge or fill material if it "causes or contributes . . . to violations of any applicable State water quality standard." As courts have recently reinforced, the Corps must comply with numeric and narrative standards, as well as the State's antidegradation rules in the lower Snake River, 33 U.S.C. § 1323(a). National Wildlife Fed'n v. U.S. Army Corps of Engineers, 92 F.Supp. 2d 1072 (D.Or. 2000). The proposal discussed in the EA runs afoul of these requirements.

The Clean Water Act requires each State to develop specific water quality criteria that ensure preservation of designated uses. 40 C.F.R. §§ 131.6(a) and 131.11(a)(1). These criteria can be numerical, narrative, or both. For example, for the lower Snake River, Washington has established a specific numeric temperature criteria of 20 degrees Celsius. The State, however, also has established a narrative standard that requires Class A waters to meet or exceed the needs of salmonid migration, rearing, spawning, and harvest. WAC 173-201A-030(2)(a-b).

Washington has also enacted water quality standards for the purpose of establishing "water quality standards for surface waters of the state of Washington consistent with public health and public enjoyment thereof, and the propagation and protection of fish, shellfish, and wildlife." WAC 173-201A-010(1). Pursuant to that purpose, the state's antidegradation rule mimics EPA's regulations and requires that for all waters, regardless of degradation, "existing beneficial uses shall be maintained and protected and no further degradation which would interfere with or become injurious to existing beneficial uses shall be allowed." WAC 173-201A-070(1). For high quality waters, "the existing water quality shall be protected and pollution of said waters which will reduce the existing quality shall not be allowed, except in those instances where" after public participation, an overriding consideration of public interest will be served; all discharges will be provided all known, available, and reasonable methods of prevention, control, and treatment; and "the lower water quality shall still be of high enough quality to fully support all existing beneficial uses." WAC 173-201A-070(4). The proposal violates both of these standards by threatening harm to aquatic life, including the ESA-listed salmonids, protected by both the narrative standards and antidegradation rules. See supra at 5.

In addition, the Water Quality Standards for Surface Waters of the State of Washington specifies that for Class A Waters, the occurrence of toxic concentrations "shall be below those which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department." WAC 173-201(a). The Corps has not provided the supporting scientific evidence to determine whether the presence of sediment-associated contaminants and the potential effects of their resuspension from dredging will be consistent with the State of Washington Surface Water Quality Standards.[2] An ecosystem level analysis of the potential exposure to toxic contaminate is required in order to provided a reasonable assurances that public health and aquatic wildlife will not be negatively impacted through exposure to these contaminants during and after dredging operations.

O-120

Failure to Comply with the Endangered Species Act

See 41 SOS appreciates the inclusion of the Biological Assessment (BA) with the EA, but we believe that the BA fails to provide an adequate basis for meaningful consultation with the NMFS, violating the ESA and its implementing regulations.

Section 7 of the ESA requires any federal agency undertaking an action that may affect listed salmon or steelhead to consult with NMFS. 16 U.S.C. § 1536(a)(2). The presence of multiple species listed under the ESA has necessitated the initiation of consultation through the preparation of the BA that accompanies this EA. The ESA mandates that the BA "shall evaluate the potential effects of the action on listed and proposed species and designated and proposed critical habitat and determine whether any such species or habitat are likely to be adversely

[2] This also raises an additional problem with the Corps' cumulative impacts analysis. A potential effect of moving these sediments from the river bottom to the riverside is their exposure to wind and other elements should dam breaching become the preferred alternative in the Corps' Draft EIS. There is no analysis of this potential in the EA, nor is this mentioned as a benefit for selection of upland disposal.

affected by the action." 50 C.F.R. § 402.12(a). See also 16 U.S.C. § 1536(c). This proposed action would undoubtedly affect numerous listed salmonids, which triggers formal consultation with NMFS. Formal consultation results in a Biological Opinion (BO), to determine if the adverse effect will jeopardize the species or destroy or adversely modify critical habitat. 16 U.S.C § 1536(a)(2).

A BA provides the foundation for consultation and should supply NMFS with enough background data to enable NMFS to "use the information in the biological assessment, together with other relevant information if necessary, to formulate a biological opinion on the proposed agency action." Dan Rohlf, The Endangered Species Act: A Guide to Its Protections and Implementation, 106 (1989). Unfortunately, the poor analysis of the actions proposed, the conclusory statements, and lack of a cumulative effects inquiry in this BA fall far short of the ESA's requirements for biological assessments. The BA is simply a regurgitation of the EA, with no additional analysis of the potential impacts to listed species, most notably salmonids. Unfortunately, just like the cursory analysis in the EA, the BA suffers from the same scientific flaws discussed above.

See 42 The BA roughly sketches some affects of the proposed project on listed salmonids, but little detail of those affects, nor the long-term impacts are discussed. In addition, the baseline of the current habitat for listed salmonids in the project area is not discussed. A thorough discussion of the impacts of current management practices is a necessary and useful starting point for an adequate BA. That discussion is missing from the BA but, standing alone, would not satisfy the more crucial requirement that a BA "evaluate the potential effects of the action." 50 C.F.R. § 402.12(a). To be meaningful or useful to NMFS and to the public, the BA must fully evaluate all of the effects of current management and the potential effects of proposed alternative actions.

Consistency with Other Salmon Recovery Documents

See 45 When the Corps' EA is viewed in the context of recent documents that serve as a basis for salmon recovery in the Columbia Basin, it becomes apparent that the this EA minimizes or ignores much of the guidance outlined in these documents. This is especially clear in respect to the Federal Caucus' document, Conservation of Columbia Basin: Salmon Recovery Strategy.

The overall premise of the Salmon Recovery Strategy states that "[i]t is time for citizens, governments, and special interests in the Columbia River Basin to collectively take immediate and sustainable actions to rebuild the health of the Basin" (Executive Summary, 12). While the Corps' EA does act upon the immediate, it largely ignores the issue of sustainability. This is particularly true in respect to the Corps' plan for the "Beneficial Use" of dredged materials for the purpose of creation of shallow water rearing habitat.

The Salmon Recovery Strategy emphasizes that there is a great need for information concerning mainstem habitat projects. Included is the need to identify responses of habitat improvements in large rivers-especially the Columbia River Basin-to determine the relationship of the size of improvement to the size of impact on the environment (Salmon Recover Strategy, Vol. II, 21). To achieve these informational needs the plan calls for "rigorous monitoring and evaluation action plans that may lead to changes in . . . identification of cause and effect relationships" (Vol.

II. 21) The existence of such uncertainties does not excuse poorly assessed projects but, as explicitly stated in the Strategy, the "ongoing uncertainties simply emphasize the importance of accountability, monitoring, and evaluation" (Ex. Summary, 5).

See 20 The proposed action for beneficial use as described in the EA, does not incorporate this form of monitoring and evaluation in respect to the impact of the proposed project upon salmon and the environment. The Corps takes care to address monitoring of the engineering integrity of this project but largely ignores scientific credibility by foregoing actions to initiate the rigorous monitoring and interagency approach as mandated by the Recovery Strategy.

The Corps acknowledges that such a program is being sought through the establishment of the RDT: As described by the Corps the RDT will, "establish sampling and testing procedures, assist with development of a monitoring plan, insure adherence to environmental laws, and involve other groups for consistency with local plans" Section 3.d.2 at p.11-12. Despite the existence of a group that will allow compliance with the Recovery Strategy, the Corps continues to insist on proceeding with a large-scale habitat project in an area of special informational needs, and many unknowns, without utilizing a scientifically credible process. The result of not having a scientifically rigorous, coordinated effort is clearly described in the Strategy. This lack of adherence "will not only render any monitoring program useless, but will also undercut the importance of the management actions themselves." (Vol. I, 55)

O-121

Again, the choice being made by the Corps is to forgo a "well organized implementation process" and to instead put the Corps' commitment and compliance to a strong interagency approach to salmon recovery into question. The need for interagency actions now is evidenced often in the Recovery plan as success, "hinges on active and effective leadership and significantly improved coordination among federal, state, tribal and local agencies." (Ex. Summary, 10).

The commitment to the Salmon Recovery Strategy is put into further doubt by the way the Corps' summarizes its priorities. As stated, "It is Corps policy to dispose of dredged material associated with the construction or maintenance dredging if navigation projects in a manner that is least costly, is consistent with sound engineering practice, and that meets federal environmental standards" Section 2 at p.3. The need to go beyond this policy has already been made evident by the continued decline of endangered salmon and steelhead populations.

In addition, NMFS has determined through its Biological Opinion that the current state of the operation the Columbia River system will not sufficiently reduce the risk to these species and therefore requires aggressive salmon recovery measures including those strategies outlined in the Federal Caucus' Recovery Strategy. The Corps needs to follow through on changes in policy and planning immediately in order to put salmon on equal footing with concerns of navigation. While these measures are not sufficient, by themselves, to recover sustainably harvestable populations of salmon and steelhead, they correctly recognize the need for fundamental changes in the management of the Snake and Columbia Rivers. In disappointing contrast to these recent pronouncements, the action proposed in this EA demonstrates the Corps' intent to continue "business as usual" on the Snake River.

In sum, NEPA, the Clean Water Act, and the ESA require more for listed species and water quality than the current EA and BA provide. Thank you for the opportunity to comment. If you have any questions, or would like to discuss this matter in more detail, please do not hesitate to contact us.

Sincerely,

Annie Warden for:
Pat Ford, Save Our *Wild* Salmon
Bill Arthur, Sierra Club
Tim Stearns, National Wildlife Federation
Rob Masonis, American Rivers
Shawn Cantrell, Friends of the Earth
Glen Spain, Pacific Coast Federation of Fishermen's Associations and Institute for Fisheries Resources
Lovenia Warren, Salmon for All
Bill Sedivy, Idaho Rivers United

Cc: Donna Darm, National Marine Fisheries Service
Charles Findley, Environmental Protection Agency, Region X
Tom Fitzsimmons, Washington Department of Ecology
Jennifer M. Belcher, Washington Department of Natural Resources
Dr. Jeffrey P. Koenings, Washington Department of Fish and Wildlife
Stephanie Hallock, Oregon Department of Environmental Quality

Organization
Save our Wild Salmon Coalition
Comment 1
The DEIS is inadequate in many respects, and the Corps' preferred alternative needlessly threatens to harm imperiled salmon and steelhead inhabiting the Columbia-Snake Rivers.
Response
The Corps realizes that dredging and disposal of material in the lower Snake River and McNary Reservoir may have negative impacts to some ESA-listed fish in the project areas (DMMP - Appendix F). However in the NMFS Biological Opinion, it is stated, "The NMFS has determined that the effects of the proposed actions will not jeopardize the continued existence of endangered SR sockeye, threatened SRF chinook, threatened SRSS chinook, threatened SRB steelhead, endangered UCRS chinook, endangered UCR steelhead, or threatened MCR steelhead or result in the adverse modification or destruction of their Critical Habitat. The determination of no jeopardy is based upon the current status of the species, the environmental baseline for the action area, and the effects of the proposed actions."

Organization
Save our Wild Salmon Coalition
Comment 2
Non-dredging (or reduced dredging) alternatives, which would be safer for fish, are not analyzed or considered. . . the Corps states that its goal is to pursue the lowest-cost alternative that does not violate federal environmental law. This is hardly a lofty standard, yet one that the actions analyzed in this DEIS still fail to meet.
Response
Non-dredging and reduced dredging alternatives were considered in the planning process and are documented in Sections 2.2.1 – 2.2.3. The text in these sections has been revised to include an expanded discussion of why these measures would not adequately address the sedimentation problem in the five reservoirs. The alternatives evaluated in the DMMP/EIS meet the purpose and need stated in Section 1.2.The alternatives also comply with the Corps' *Planning Guidance Notebook*, Engineering Regulation 1105-2-100, which states that "It is the Corps of Engineers policy to accomplish the disposal of dredged material associated with the construction or maintenance dredging of navigation projects in the least costly manner. Disposal is to be consistent with sound engineering practice and meet all Federal environmental standards...". The Corps also considered and, wherever possible, integrated components of alternatives that would minimize impacts to or even benefit aquatic resources. Section 1.8 has been expanded to discuss the role of the Local Sediment Management Group in addressing changes in upstream land management to reduce erosion and sedimentation, as well as their role in identifying and evaluating opportunities for beneficial uses of dredged material.

Based on its own analysis and comments received from the regulatory agencies, the Corps believes the four action alternatives that were analyzed are cost-effective and are in compliance with environmental laws.

Organization
Save our Wild Salmon Coalition
Comment 3
One of the more disturbing features of the Corps' plan is that it entirely dismisses dam-breach

scenarios, which would obviate the need for expensive and risky navigation dredging and levee construction.
Response
Breaching any of the dams would not meet the purpose of maintaining the authorized navigation channel within the five reservoirs. Therefore, dam breaching was not considered as an alternative. However, this does not mean that possible dam breaching was not considered in the preparation of the DMMP/EIS. Section 1.6 of the DMMP/EIS addresses the relationship of the DMMP/EIS to the Lower Snake River Juvenile Salmon Migration Feasibility Study (Feasibility Study). The Feasibility Study analyzed the impacts of breaching the four lower Snake River dams as one of the alternatives. Therefore the DMMPEIS did not repeat this analysis. However, the preferred alternative in the Feasibility Study is Major System Improvements (Adaptive Migration), which includes modifying the dams, optimizing voluntary spill, and implementing operational modifications for fish transportation. Even though this alternative does not include dam breaching, the 2000 National Marine Fisheries Service Biological Opinion calls for major progress reports in 2003, 2005, and 2008. The 2008 report must include a determination of whether or not to pursue dam breaching. Until such a decision is made and Congress authorizes dam breaching, the Corps has the responsibility to maintain the navigation in the lower Snake River as authorized by Congress.

Organization
Save our Wild Salmon Coalition
Comment 4
If nothing else, the Corps should not be moving ahead with a major long-term project with serious impacts to aquatic species until a final decision on dam breach is made.
Response
The decision whether or not to pursue breaching of the four lower Snake River dams may not be made until the 2008 checkpoint. Changes in the need for navigation on the lower Snake River based on that decision will not likely be made until sometime after 2008. In the interim the Corps needs to continue its long-term planning to meet its responsibility to maintain the navigation channel. It should be noted that, even if the four lower Snake River dams are breached, there would still be a sediment issue (and the need for dredged material management) in McNary Reservoir.

Also see the response to comment 3 above.

Organization
Save our Wild Salmon Coalition
Comment 5
Instead, it (the Corps) has presented four virtually identical alternatives that differ from each other in only the most marginal respects. This is hardly a sufficient scope of different alternatives to offer a reasoned choice of options: absent meaningful consideration of non-dredging or reduced dredging.
Response
The range of alternatives meets the project purpose and need. Non-dredging and reduced dredging alternatives were considered. The Corps was unable to identify any non-dredging alternatives that would preclude the need for dredging. Reducing sediment generated by land use practices was considered, but would not eliminate the need for dredging. Although the Corps has

no authority to change land use practices on non-Corps property, the Corps plans to use the Local Sediment Management Group to pursue possible modifications to land use practices to reduce the future need for dredging.

Organization
Save our Wild Salmon Coalition
Comment 6
Clearly, a "no action" alternative that involves as much "action" as this one is invalid to meet the purposes described above, even if continued dredging was truly required, which SOS disputes.
Response
When preparing National Environmental Policy Act (NEPA) documents, the "No Action" alternative can also be called the "No Change" alternative, as in no change in the current way of doing business. For the DMMP/EIS, "no action" was defined as no change in the way the Corps is currently maintaining the navigation channel, port facilities, boat basins, or irrigation intakes. This interpretation is described in the Council on Environmental Quality publication "NEPA's Forty Most Asked Questions," which states that where "on-going programs initiated under existing legislation or regulations will continue, even as new plans are developed.... "no action" is "no change" from current management direction or level of management intensity." This guidance further states that: "To construct an alternative that is based on no management at all would be a useless academic exercise. Therefore, the "no action" alternative may be thought of in terms of continuing with the present course of action until that action is changed." (46 Federal Register 18026, as amended, 51 Federal Register 15618).

Organization
Save our Wild Salmon Coalition
Comment 7
The Corps failed to evaluate non-dredging (or reduced dredging) alternatives such as lighter barges or reduced commodity shipping.
Response
The Corps evaluated a variety of non-dredging and reduced dredging measures. See responses to comments 2 and 5 above. In addition, the response to comment 29 below provides detailed discussion of light-loading barges.

Organization
Save our Wild Salmon Coalition
Comment 8
The Corps presents the Congressionalauthorization to pursue dredging, see DEIS 1-5, as if it requires that the Corps continue dredging. Congress authorized dredging, but does not require it.
Response
The legislative history of lower Snake River navigation indicates Congress intended for the lower Snake River to have a navigation channel 14 feet deep and 250 feet wide up to, and including, Lewiston, Idaho. The Corps plans to continue to carry out the intentions of the United States Congress as closely as possible.

Organization
Save our Wild Salmon Coalition
Comment 9
A further example of the DEIS' myopic focus on intensive dredging is its failure to meaningfully address methods to reduce sediment input into the rivers, which would reduce substantially the need to dredge. NEPA requires consideration of reasonable alternatives like this one even if they are not within the Corps'jurisdiction. 50 C.F.R. 1502.14 (c). SOS urges the Corps to evaluate opportunities to work cooperatively with state, federal and private land owners and managers to reduce sediment input into the Columbia basin streams as an alternative to continued high-impact dredging.... Another alternative the Corps should have considered id breaching Lower Granite Dam.
Response
The Corps did examine possible ways to reduce sediment input into the rivers. The only potentially viable methods are changing land use practices and installing bendway weirs. Neither of these methods would totally stop sediment from entering the rivers or being deposited in unacceptable locations. The Corps plans to work through the Local Sediment Management Group (LSMG) to encourage land use managers to adopt practices that would reduce sediment input. The Corps also proposes to study bendway weirs if the decision is made in 2008 that the Snake River dams will remain intact and functional.

In-water structures, such as bendway weirs, have been looked at in the past and were evaluated as part of the development of the DMMP (See Section 2.2.3.2 of the DMMP/EIS) Structures like bendway weirs can increase water velocity and impact flow direction, but sediments will accumulate behind them. Specifically, bendway weirs would not be appropriate in the Lewiston/Clarkston area because they would raise the water surface during high flows and could then over-top the levee. Keeping the navigation channel clear and the high-flow water surface level down are goals of the plan.

Bendway weirs may be an appropriate option in other areas where water surface elevation isn't as critical as at Lewiston. Bendway weirs, or other appropriate non-dredging technologies, may be considered at other locations to address limited sedimentation on a case-by-case basis. The Corps and LSMG may evaluate use of such a technologies in the future, within the framework provided by the DMMP.

Breaching Lower Granite Dam would not meet the project purpose and need which includes providing navigation to Lewiston, Idaho. Because breaching the dam would not meet the project purpose, this alternative was not considered in the DMMP/EIS. Also see responses to comments 3 and 5 above.

Organization
Save our Wild Salmon Coalition
Comment 10
There are other opportunities that may satisfy the Corps goal of particular channel depths besides dredging, such as the idea of "sediment pass through." The Corps should more actively seek out these kinds of alternative avenues.
Response
The Corps has considered sediment pass through, or flushing (both with and without reservoir drawdown) and has determined that it is not a viable alternative to meet the purpose and need.

Without drawdown, a spring flushing operation would not develop sufficient velocities within the reservoir to pick up significant quantities of sediment and transport it downstream. With drawdown, the sediment flushing could be effective, but the impact to project operations, as well as project facilities and major support features, would exceed the benefits.

The drawdown of the reservoir of 10 to 15 feet during the annual flood season and smolt outmigration has some potential. One of the major drawbacks of drawing the reservoir down to that degree during the fish outmigration period would be the rendering of the juvenile fish passage system at Lower Granite Dam as unusable. There are two alternatives for fish passage without the juvenile bypass systems, turbines and the spillway.

For turbine passage, the traveling screens could be pulled, and fish would pass through the turbine, with possibly higher than desired mortality rates. In addition, a large number of fish would be trapped in the gatewells with no opportunity for exit, and a great number could eventually die there. Although a lift tank was tested in 1994 for removal of fish from gatewells (Swan et al. 1994), up to 18 would need to be constructed at a cost that may exceed the dredging costs for the 20-year course of action. Another alternative would be to periodically dip gatewells and put fish in trucks for transporting downstream. Gatewell residence time, however also plays a factor in that depending on the gatewell environment, conditions for fish can be detrimental if fish spend too long in there.

If an all spillway route were determined to be the most appropriate passage route, with no powerhouse operation, a large eddy would be set up in the tailrace of the dam. A predator study (Bjornn and Piaskowski 1999) showed that during spill operations, predators in the tailrace of Lower Granite Dam tended to seek out the lower velocity areas (although this study mentioned spill on, versus spill off without regard to powerhouse operations). If an eddy is set up, it has the potential to continually cycle juvenile fish within the eddy and constantly expose them to more predators. Only a few minutes of migration delay were seen in the Ice Harbor Dam tailrace (Eppard et al, 1999) for fish spilled during high and 100% spill scenario, however, some fish that passed during these scenarios do experience longer tailrace residence times (Eppard –NMFS-Personal Communication, 2002).

In addition, spawning migrations of fish into Alpowa Creek may be blocked by drawdown operations. Rearing areas important to fall chinook and sturgeon would be rendered less usable if drawdown occurred. Invertebrates that use the Port of Wilma, Centennial Island and other known shallow water rearing areas would be desiccated and would provide little to no benefit to fish rearing in the area either during drawdown or after water up. Bennett demonstrated that after the drawdown event, Smallmouth Bass changed their predation targets, from preying on primarily crayfish to a diet composed of more juvenile salmonids. This was due primarily to the reduction in the number of invertebrate species caused by the drawdown. Because these invertebrate species would be negatively affected, other species that prey on them including White Sturgeon, channel catfish and other predatory species all have the potential to change predation targets and negatively affect salmonid smolts. Disruption of the food web on a repetitive basis would cause overall detrimental effects to the limnological characteristics of the reservoir.

Organization
Save our Wild Salmon Coalition
Comment 11
The DEIS falls far short of these strict standards. Instead it presents sweeping generalizations

and unsupported assertions, and promises environmental benefits that are either unsupported or actively contradicted by the available science.
Response
The proposed habitat creation is supported by established research, the study plan and findings of which were developed and reviewed by a variety of government, tribal, and academic peers. Numerous scientists from federal, state, university and tribal agencies set up the study design in 1987 to ensure it evaluated the effectiveness of habitat creation. These agencies included the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, National Marine Fisheries Service, ESSA, Battelle-PNNL, Washington Department of Fisheries, Oregon Department of Fish and Wildlife, University of Idaho, University of Washington, Oregon State University, and the Yakama Indian Nation. The researcher involved with many of the studies was David Bennett, Ph.D., a tenured professor at the University of Idaho. With a multiple-year study, a lead researcher who was a recognized expert in the field, and a study design from the region's leading experts, the resulting science supports the proposed beneficial uses of dredged material.

In their Biological Opinion, NMFS has concurred that the proposed creation of salmon habitat shows promise. The Corps will monitor the success of any habitat creation areas as described in the Monitoring Plan (Appendix M).

Organization
Save our Wild Salmon Coalition
Comment 12
For example, the DEIS largely discounts the impacts of the project to ESA-listed fish based on the premise that relatively few fish will be in the river during the time that dredging will actually occur.
Response
These issues are addressed in the DMMP/EIS in Appendix F. Fall chinook typically have an ocean type rearing life history and typically outmigrate seaward during the summer as subyearlings. (Tiffan et al, 2001). According to Williams and Bjornn 1998, "A small proportion of hatchery and natural subyearling fall chinook salmon residualized and migrated early in spring 1997. However, as with fish released in 1995, the number that overwintered and migrated seaward as yearlings in spring was small and did not affect survival estimates." This indicates that only a small proportion of fall chinook over winter in the reservoirs during some years. Although the Corps has no desire to harm any fish and is attempting to avoid impacts by working in the established work windows, the Corps has determined that proposed dredging and DMMP/EIS could harm some individuals of these listed stocks.

Section 3 of the DMMP/EIS outlined fall chinook behavior and life stages in the project area and determined that proposed activities would likely adversely affect fall chinook salmon by dredging. However, the Corps would be creating a long-term benefit to these salmonids by creating rearing habitat. The DMMP/EIS also addresses Snake River Basin steelhead in Section 3, covering behavior and life stages in the project area and determined that proposed activities would likely adversely affect juvenile fish by dredging. However, the proposed activities would not likely adversely affect adult passage based on the type of dredging involved. In addition, the DMMP/EIS discusses Snake River Basin Spring/Summer-Run Chinook in Section 3, indicating that proposed activities are likely to adversely affect overwintering and rearing fish of these runs.

According to NMFS Biological Opinion (Appendix F), the actions outlined in the DMMP/EIS will not likely jeopardize the existence of any of the listed endangered or threatened species in the

Snake or Columbia rivers.

Organization
Save our Wild Salmon Coalition
Comment 13
It is not at all clear that impacts will be so short-term that they will not affect fish arriving later.
Response
Sediments disturbed by dredging are not expected to drift great distances downstream and cover existing fish habitats. In addition, as part of the Reasonable and Prudent Measures (RPMs) set out by the NMFS Biological Opinion, the Corps is directed to assess the habitat that is currently in the reservoir both before and after dredging occurs.

The US Fish and Wildlife Service indicates that there is little evidence that dredging operations actually cause any of the problems for fish attributed to high turbidity (Allen and Hardy, 1980). In fact the criteria of not exceeding 5 NTUs over the background level for turbidity while dredging is relatively conservative. Although turbidity may cause stress, Gregory and Northcote (1993) have shown that moderate levels of turbidity (35-150 NTU) accelerate foraging rates among juvenile chinook salmon, likely because of reduced vulnerability to predators (camouflaging effect).

Organization
Save our Wild Salmon Coalition
Comment 14
The DEIS does not explain how sediment plumes will not adversely impact fish habitat downstream as it settles.
Response
See response to comment 13 above.

Organization
Save our Wild Salmon Coalition
Comment 15
Yet the DEIS provides no guidance on what situations might constitute an "emergency," what steps could be taken to avoid one, and what environmental consequences can be expected to follow from dredging during migration season. SOS strongly disagrees that commercial or economic harm can constitute an emergency that should permit dredging during the migration season.
Response
Section 2.2.4.4 defines what an emergency is and gives several potential situations that would be considered an emergency requiring emergency dredging, consistent with Operation and Maintenance of Army Corps of Engineers Civil Works Projects Involving the Discharge of Dredged or Fill Material into Waters of the U.S. or Ocean Waters (33 CFG 335.7). Any potential emergency situation would likely be caused by high flows moving sediment or rock. The Corps cannot control the flows of tributaries entering the reservoirs. Therefore, the Corps cannot take steps to avoid an emergency other than perhaps the periodic removal of sediment from areas of the navigation channel known to experience shoaling. The environmental effects of performing

emergency dredging would depend upon the situation. The Corps would attempt to perform the emergency dredging in a manner that minimizes any adverse effects on the environment as much as possible. The Corps will consult with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service for emergency situations. This consultation will occur as soon as possible, but may occur concurrently with or after completion of the emergency dredging.

Organization
Save our Wild Salmon Coalition
Comment 16
The DEIS largely dismisses the potential for dredging to stir up toxic wastes contained in sediments. SOS believes that the risks presented could be far greater than those acknowledged by the DEIS.
Response
The findings presented in the DMMP/EIS are based on reviews of available sediment data. Analysis prior to dredging will include chemical analysis to identify contaminants if they exist within the sediments to be dredged. The collection and analysis of sediment samples will be done in accordance with a specific Sampling and Analysis Plan that is designed to provide a high probability that significant amounts of chemicals of concern will be identified prior to the start of dredging operations. A monitoring plan is being developed, and is included with the Final DMMP/EIS. Monitoring during dredging will assess whether unacceptable amounts of sediment movement may occur during dredging operations and require that the work be stopped and/or modified to provide additional controls or limit the extent of sediment plumes in the river. While the Corps' intent is to test the sediment and avoid reintroduction of any chemicals of concern into the water column, monitoring will be used to limit the extent of impacts if an unknown "hot spot" is encountered during dredging. See Monitoring Plan (Appendix M).

Organization
Save our Wild Salmon Coalition
Comment 17
The Corps should provide much more detailed information, including the results of recent comprehensive sampling and core tests throughout the areas to be dredged.
Response
Available data that is relevant to the potential dredging activities were considered during the planning process. Section 3.9 of the DMMP/EIS has been revised to provide more detail on how sediment data were used. Detailed data are provided in Appendix H, including the pertinent data from recent sediment sampling. As the sampling and analysis of each area proposed for dredging is completed, that information will be made public as a part of the review process for each specific dredging project.

Organization
Save our Wild Salmon Coalition
Comment 18
The Corps should provide more detailed information on how it intends to monitor the dredging to ensure that toxics "hot-spots" don't cause habitat degradation.

Response
See response comment 16 above.

Organization
Save our Wild Salmon Coalition
Comment 19
The DEIS assumes, without any analysis or support, that in-river disposal will create effective "habitat" for salmon and other species. While SOS supports valid salmon habitat restoration measures, we are concerned that the benefits of in-river disposal are overstated and the risks have been ignored. The DEIS fails to address these concerns or provide any other support for the Corps' conclusion that in-river disposal will benefit fish.
Response
Findings are based upon a multi-year study of creation of habitat. Numerous scientists from federal, state, university and tribal agencies set up the study design in 1987. These agencies include the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, National Marine Fisheries Service, ESSA, Battelle-PNNL, Washington Department of Fisheries, Oregon Department of Fish and Wildlife, University of Idaho, University of Washington, Oregon State University, and the Yakama Indian Nation. The researcher involved with many of the studies was David Bennett, Ph.D., a tenured professor at the University of Idaho. With a multiple year study design, a lead researcher independent from the federal government, and a study design from the regions leading experts, the Corps believes that the science is sound (Web et al 1987).

In addition, the NMFS 2000 Biological Opinion for operation of the Federal Columbia River Power System (FCRPS) indicates that the Corps is supported in these actions. Action 155 states "BPA, working with the Corps will take immediate steps to begin to address these uncertainties by collecting baseline data, improving mainstem reaches in ways that mimic the range and the diversity of historic habitat conditions as much as possible, and monitoring and evaluating the results." For this project, the Corps has met the baseline data gathering through David Bennett's work and is now attempting to mimic the habitat that was in place prior to the hydrosystem completion.

Organization
Save our Wild Salmon Coalition
Comment 20
Some provisions for monitoring results and changing direction as required should be included. To the extent that the "Local Sediment Management Group" could constitute such an adaptive management mechanism, much more information on standards needs to be included to ensure careful scrutiny of results and cautious adaptation to protect natural resources. Adaptive strategies linked to monitoring could affect frequency of dredging, minimize costs, and minimize ecological impacts.
Response
As described in the Biological Assessment for Anadromous Fish Species and the Biological Opinion from NMFS (both found in Appendix F), the Corps will implement a number of monitoring plans. These will largely focus on water quality, sediment contamination, and redd distributions. The Corps plans to perform biological monitoring of the disposal areas to ensure that the areas are providing the anticipated food organisms and are being used by target fish species. The Corps also plans to monitor the stability of the embankments created by in-water

disposal to determine if changes need to be made in the construction plans. Results from all of the monitoring will be used to indicate where and how changes need to be made in the disposal plan. The LSMG will be appraised of the results of the monitoring. The LSMG will also be asked to recommend changes based on the monitoring results.

Organization
Save our Wild Salmon Coalition
Comment 21
The DEIS fails to discuss potential impacts to the river ecosystem associated with constraining flood waters within levees, rather than letting them spill into floodplains. It is silent on potential aquatic risks associated with construction and maintenance of these structures, which could be anticipated given their proximity to the river.
Response
With respect to the potential ecosystem impacts associated with constraining rivers within levees, the proposed action would constrain no more of the river within levees than the original design capacity. The purpose and need of the DMMP is, in part, to address flow conveyance in Lower Granite during a flood event: flow conveyance is currently affected by the levees that were constructed as an upstream extension of the lock and dam complex.

With regard to the construction of the levee raise and risks to aquatic resources, the proposed levee raise is not anticipated to have significant adverse effects on aquatic resources. Most construction would occur on the existing levee, and the Corps would take all practicable measures to minimize the sedimentation that results from the construction activities. The final design of levee modifications would seek to avoid in-water work to the extent practicable, and the Corps would plan to complete work on the land-side of the levees and minimize work on the river side of the levee. Once the proposed levee raise is constructed, maintenance of the levees would be similar to the program currently in place.

Organization
Save our Wild Salmon Coalition
Comment 22
Moreover, the Corps should discuss whether levee construction is even necessary in light of the extensive and highly conservative flood control management available in the upper Snake basin.
Response
The hydrology used in the risk analysis is based on Corps flood control rules and regulations. The hydrology analysis considered upstream flood control management and sedimentation rates. Appendix C presents the details of the Corps' hydrologic analysis. These factors were considered in combination with the Corps' flood control regulations, which apply to projects such as Lower Granite. Further, a risk assessment is a component of the overall hydrology analysis. The risk assessment allowed evaluation of damages prevented by alternatives in comparison with the alternatives' costs. The recommended alternative presented a positive benefit-to-cost ratio.

Organization
Save our Wild Salmon Coalition
Comment 23

Finally, as noted above, the DEIS fails to disclose that it is highly likely that the proposed three foot levee increase will prove inadequate during the life of this project, and that further expensive increases will be necessary.

Response

The Corps analysis utilized best data available, and concluded that further levee raises would not be needed in the economic life time of the Lower Granite Project. Throughout the life of the project (up through the year 2074) the risk of flood damage is significantly decreased by the three-foot levee raise. The need for levee raises will be re-evaluated after 2074 based upon current conditions at that time.

Organization

Save our Wild Salmon Coalition

Comment 24

[T]he hydraulic modeling used to determine sedimentation locations, volumes, and rates in this DEIS is inadequate... The Corps originally proposed a two-dimensional model analysis of sediment transport in the Snake and Clearwater Rivers that would have given a more accurate understanding of sedimentation issues. However, the Corps elected to discard that analysis in favor of an inferior one-dimensional model because of time constraints... Additionally, some of the studies are over a decade old, and have not been updated.... Given that this DEIS is essentially driven by sediment transportation issues, SOS objects to use of the one-dimensional study and asks the Corps to delay implementation of a final EIS until appropriate and scientifically sophisticated modeling can be achieved.

Response

A one-dimensional model provided results that were valid and appropriate for the scope of this DMMP. Data for a two-dimensional model is not readily available. Further, the uncertainty of the amount and timing of future sediment inflow into the reservoirs outweighs whether a one- or two-dimensional model is used.

Organization

Save our Wild Salmon Coalition

Comment 25

The DEIS ignores the sweeping range of direct and indirect harms faced by salmon migrating through this region of the Columbia and Snake Rivers.

Response

The Corps addressed impacts to migrating salmon in the Lower Snake River Juvenile Salmon Migration Feasibility Study (LSRJSMFS), which is thoroughly documented in the February 2002 Final Feasibility Report/EIS (FR/EIS). The DMMP/EIS considered the FR/EIS and its documentation of these impacts (see section 1.6), and these findings are incorporated by reference. As stated in the Draft DMMP/EIS cumulative effects are those effects that "...result from the incremental impact of the [proposed] action when added to other past, present, and reasonably foreseeable future actions." The CEQ and EPA provide guidelines on conducting cumulative effects analysis, which the Corps of Engineers consulted in conducting its cumulative effects analysis (CEA) for the Draft DMMP/EIS. CEQ and EPA both provide guidance on setting spatial and temporal parameters for CEA, and acknowledge that, while the geographic boundaries of the CEA may be broader than those used in assessing direct and indirect effects, practical delineations of these boundaries should be established. For the Draft DMMP/EIS, the Corps of Engineers considered past, present, and reasonably foreseeable future events throughout

the lower Snake River and McNary Reservoir. Consideration of historic events, such as the development, operation, and maintenance of the inland navigation system, is important in establishing the environmental baseline (i.e., affected environment) for evaluation of the DMMP, and are documented in Chapter 3 of the Draft DMMP/EIS. The discussion of cumulative effects analysis has been expanded in the Final DMMP/EIS (Section 4.14) and provides more details on the geographic and temporal scope of the analysis, as well as resource-specific discussion on potential cumulative effects.

CEQ regulations provide further guidance that CEA should consider the effects of the proposed action when added to past, present, and reasonably foreseeable future actions. The Corps of Engineers readily acknowledges the proposed action's potential for additive and/or synergistic effects on environmental resources, but does not anticipate such impacts would occur as a result of the proposed action. As stated in the Draft DMMP/EIS, the proposed action is not anticipated to add to existing or future impacts so as to result in significant environmental effects. In fact, proposed action is anticipated to have some benefits to aquatic resources. Further, the adaptive management scenario proposed in the preferred alternative would provide the flexibility to modify and evaluate specific actions within the framework provided by the DMMP, potentially resulting in even greater benefits (and correspondingly fewer negative effects) than currently anticipated.

Organization

Save our Wild Salmon Coalition

Comment 26

The DEIS, however, is entirely silent on hydrosystem management and this sweeping range of harms presented to migrating salmon.

Response

The LSRJSMFS addresses system management effects on migrating salmon. The DMMP/EIS considered the LSRJSMFS and its documentation of these impacts (see section 1.6).

Also see response to comment 25 above.

Organization

Save our Wild Salmon Coalition

Comment 27

The DEIS's cumulative effects analysis does not aid in anyone's evaluation of the risks and benefits of the various alternatives.

Response

See response to comment 25 above.

Organization

Save our Wild Salmon Coalition

Comment 28

The DEIS fails entirely to justify the need for the project.

Response

Section 1 of the DMMP/EIS (and in particular, Sections 1.2 and 1.7) provides detailed discussion

of the purpose and need and justification for dredged material management in the lower Snake River and McNary Reservoir. Section 1.4 provides details on the authorization of the navigation channel in the DMMP study area. The navigation channel within the study area is subject to sedimentation that reduces the channel to less than the Congressionally authorized 14-foot depth. Thus, the Corps has examined a broad range of alternatives to address sedimentation-related concerns for navigation and flow-conveyance, including non-dredging alternatives. The DMMP/EIS is consistent with the requirements of NEPA in stating the purpose and need, describing alternatives, and presenting the evaluation of those alternatives. Also see response to comment 29 below.

Organization
Save our Wild Salmon Coalition
Comment 29
While the DEIS describes the economic benefits of dredging, it fails to analyze the economic impact of reduced or no dredging. The analysis of the economic costs and benefits turns on a simplistic choice between barging as it exists today, and no barging altogether.
Response
The purpose of this DMMP/EIS is, in part "to develop and evaluate alternative programs to maintain the authorized navigation channel and certain publicly-owned facilities in the lower Snake River and McNary reservoirs for the next 20 years." Consideration of reduced maintenance that would result in a change (in depth) to the authorized Federal channel was not considered as a part of the Draft DMMP/EIS. Therefore, no detailed incremental analysis of navigation costs and benefits for different channel conditions was performed. Had the purpose included determining the national economic development plan (NED), a variety of channel depths, both shallower and deeper than the authorized channel, would have been considered. Navigation benefits and dredging costs would have been compared to determine the channel depth that yielded the maximum net economic benefits. Instead the Draft DMMP/EIS performed a benefit analysis on the authorized Federal navigation project to ensure that the project remained economically feasible.

In further response to the issues raised in the comment above, transportation commodity and barge cost data prepared for the Lower Snake River Feasibility Study were used to determine the feasibility of the maintenance dredging proposed and evaluated in the DMMP/EIS. For this analysis two shallower Federal navigation channels, with controlling depths of 13 feet and 12 feet, were assumed to result from termination of maintenance dredging. Grain shipments, representing 78.8% of the commerce on the Snake River for the period of 1987 to 1996, were selected to represent the impacted commerce. Grain barge costs for shipments from the various ports on the Snake River system were developed to reflect light loading to accommodate the shallower channels. Reduced cargo capacity of the standard 3,600-ton grain barge (274 feet long, 42 feet wide, and 13.5 feet draft) with drafts of 12.5 feet and 11.5 feet were determined to be 3,270 tons and 2,950 tons, respectively. The impact of this reduced capacity would be to raise per ton barge costs by 10% and 22%, respectively. The resultant increase in transportation costs for moving the forecast grain shipments from the Snake River in the 20-year period from 2004 to 2024 was compared to the avoided annual cost of maintenance dredging. The result of this analysis, based on 1999 costs, indicated that dredging costs were equal to the estimated increase in barge costs when the channel capacity was reduced by only one foot. However, where channel depths were reduced by two feet, the cost of dredging was about half of the increased cost to barge transportation. In essence, shoaling that reduces the channel depth by one foot represents the "break even" point where maintenance dredging is feasible and cost-effective. While this

study was not an exhaustive analysis of the feasibility of reduced channel maintenance dredging, it indicates that dredging was more cost-effective than light loading the present barge equipment. If all waterborne commerce on the Snake River were considered, maintenance dredging of the federal navigation channel would be both feasible and more cost-effective than light-loading barges in the scenario described above, which considers only grain shipments.

Organization
Save our Wild Salmon Coalition
Comment 30
While SOS is not necessarily opposed to a flexible or adaptive process for making disposal determinations, the Corps has failed to provide any guidance, restrictions or standards for making these determinations. Under the preferred alternative, this group will have virtually uncabined discretion on where and how to make disposal decisions and what standards should apply. SOS urges the Corps to provide greater detail and governing standards on how disposal decisions are to be made.
Response
See Section 1.8 of the DMMP/EIS for a detailed discussion of the role of the LSMG. Ultimately, the Corps will make the determination on what disposal method and location to use. The Corps will take the LSMG's recommendation into consideration when making the decision. When making the decision, the Corps will follow its policy of using the least costly method that meets environmental standards. In addition, all dredged material management actions taken within the framework of the DMMP and with the input of the LSMG will meet regulatory and procedural requirements of state and federal laws and regulations.

Organization
Save our Wild Salmon Coalition
Comment 31
SOS also urges the Corps to consult with and to include the public, including conservation, fishing and tribal groups, when making disposal decisions. These individual decisions must be the subject of site-specific NEPA analysis and ESA consultation.
Response
The Corps has expanded the list of participants in the LSMG to include non-agency groups such as ports, Tribes, and environmental groups. The LSMG members would be notified in advance of any proposed dredging and have an opportunity to make recommendations on the disposal method and location. As illustrated in Figure 2-7, the Corps plans to follow a series of steps each time a dredging activity is planned. These steps include publishing a public notice prior to the dredging activity, coordinating with NMFS and USFWS, coordinating with the Tribes, and coordinating with the State Historic Preservation Offices. All coordination will be site-specific. The Corps does not plan to prepare an Environmental Assessment or Supplemental EIS each time it dredges. However, the Corps may supplement the DMMP/EIS if there are substantial changes in the plan or impacts.

Also see the response to comment 30 above.

Organization
Save our Wild Salmon Coalition
Comment 32
SOS believes that the entire purpose and need is far too narrowly defined.
Response
The project purpose and need are consistent with Corps policy and requirements and Congressional authorization.

Organization
Save our Wild Salmon Coalition
Comment 33
The purpose and need for this DEIS should be focused more broadly on transportation of products from Lewiston downstream. There are multiple different ways to transport products that don't require the full navigation channel, or even any barge navigation at all. This DEIS should evaluate the relative merits, costs, and environmental risks presented by different transportation regimes, including barge navigation, so that Congress and the public can have a complete picture of the situation.
Response
The issue of finding ways of transporting goods from Lewiston downstream was answered years ago when Congress authorized the construction of the Snake River dams and the establishment of a navigation channel. The costs of alternative methods of transporting products were evaluated (see section 1.7.1). There was strong economic justification for maintaining the existing navigation system.

Also see response to comment 29 above.

Organization
Save our Wild Salmon Coalition
Comment 34
However, the Corps has chosen to divorce dam management from dredging and contemplate them in two separate NEPA documents, each of which ignores the issues raised in the other. Clearly, dam management "cannot or will not proceed unless otheractions [namely dredging] are taken" concurrently.
Response
Section 1.6 of the DMMP/EIS addresses the relationship of the DMMP/EIS to the Lower Snake River Juvenile Salmon Migration Feasibility Study (Feasibility Study). See the response to comment 3 above. "Dam management" does take place without dredging. For example, dredging is not required to maintain the ability of the Snake River dams and McNary Dam to produce hydropower, which is an authorized project purpose of the dams. However, dam management does come into play when producing hydropower, as modifications to the dams are being proposed to divert juvenile salmon away from the powerhouse.

Organization
Save our Wild Salmon Coalition
Comment 35
In fact, the Corps goes so far as to raise numerous concerns about sedimentation/turbidity issues associated with dam breach, but then ignores the same issues altogether insofar as they relate to the dredging that is necessary in the absence of breach.
Response
Turbidity caused by dredging, as compared to dam breaching, would be localized, minor, and short-term. Conversely, dam breaching would involve large, system-wide turbidity impacts.

Sedimentation and turbidity impacts associated with dredging are addressed in a number of ways including: restricting the time of year during which dredging activities can take place, restricting the methodology for dredging, characterizing the sediments that are to be dredged prior to dredging operations, and monitoring during dredging operations. The restrictions and controls proposed for dredging operations are appropriate for the scope of the proposed actions.

Organization
Save our Wild Salmon Coalition
Comment 36
Accordingly, SOS requests that the Corps take the time to address the costs and environmental risks associated with dredging in the final Migration DEIS before a ROD is finalized.
Response
The Lower Snake River Juvenile Salmon Migration Feasibility Study EIS was finalized in February 2002. Section 1.6 of the DMMP/EIS describes the relationship between the DMMP and the Feasibility Study. The findings of the Feasibility Study have been considered in the development of this DMMP/EIS.

The Feasibility Study EIS does discuss operations and maintenance (O & M) costs and impacts associated with dredging. The Existing Systems and Major Improvements Appendix E discusses the costs of dredging. Operations and maintenance annual costs are based on historical records, tabulated and broken out per work breakdown structure and separated into O&M costs for each dam. Minor and major rehabilitation costs, such as costs for navigation locks, spillways, fish transportation, dredging and miscellaneous costs, are included in the O&M cost data. Costs for minor repair are shown as an annual cost based upon an assumed percentage of O&M costs. An additional percentage was used to cover the cost of aging equipment and increased dredging. When minor repairs and routine operation and maintenance costs are combined, the result is the complete cost of operating and maintaining the four lower Snake River dams, except for major rehabilitation of the dam turbine and generator units. Routine operation, maintenance, and minor repair costs are included for the full duration of the economic study. The O&M costs are included in the cost estimate annex to Appendix E of the LSR study

The Economic Appendix, Section 3.8.4.2 Dam-Related Operation, Maintenance, Repair, Replacement and Rehabilitation discusses avoided costs for dam-related operation, maintenance, repair, replacement and rehabilitation (O,M,R,R&R) that would be incurred under Alternatives 1 through 3 include, but not limited to:

- Approximately $7.7 million to operate and maintain the dams (i.e., average annual operation and maintenance costs); and

- Approximately $3.1 million to operate and maintain the navigation system (i.e., average annual costs for lock operation and maintenance, dredging and other items related to navigation). ...

The Record of Decision for the Feasibility Study will discuss dredging and is supported by the information located in the Feasibility Study and incorporates information from this study. Historical environmental impacts associated with dredging are references in the Alternative One evaluations as it is the existing systems alternative in the Feasibility Study. Dredging was considered to continue in some fashion and was included in several areas of the Feasibility Study. For example, Appendix C, Water Quality Appendix discusses water quality and cites several studies and investigations linked directly to the Corps dredging authorities and projects, and these predominantly focus on the Snake and Clearwater confluence area. Corps has historically sampled sediments between the Port of Lewiston and the confluence of the Snake and Clearwater River. The Walla Walla District study (Sediment Sampling of Proposed Dredge Sites in the Confluence of the Snake and Clearwater Rivers, Pinza et al., [1992]) tested 19 sites for chlorinated pesticides at port areas on the lower Snake and Columbia rivers. Since the early 1980s, the Walla Walla District monitored sediment prior to dredge operations for a suite of organic compounds. In the sediment analysis studies for 1984 and 1985 for interim dredging (Corps, 1986; 1987), the Corps sampled sediments between the Port of Lewiston and the confluence of the Snake and Clearwater River. In 1990 and 1997 Corps sediment surveys for dredging and individual documents supporting 40 Code of Federal Regulations, Part 230, Section 404(b)(1) evaluations for specific dredge operations. The special tests conducted for this study included collection of sediment samples downstream of the previous sediment samplings. In 1998, the Corps embarked upon its own Dredged Material Management Program study. The products resulting from the endeavor will include a programmatic manual and a regionally approved sediment test framework to address methods and procedures for testing. Another sediment study was repeated in 1999. Prior to the completion of the Feasibility Study document, the Corps evaluated sediments for the proposed fiscal year 2001 confluence dredging in the Lower Granite pool. Results from this investigation can be found in the Feasibility Study and this report. Over a period of 15 years when the Corps dredging teams tested the compounds in the Lower Granite confluence area, there was a steady decrease of PAHs in the sediments of this area. Several factors may have a relationship to this trend and this is discussed in the Feasibility Study. The results of the sediment analysis are summarized below for each parameter and described in detail in Appendix C, Water Quality, Section 3.3 Sediment Quality.

The Feasibility Study also discusses dredging issues in the navigation/transportation section of the EIS. Wheat growers and many industries along the river depend on it to transport their products to market. Many large vessels and barges travel up and down the river daily, requiring channels deep enough for them to navigate (see Section 4.9, Transportation). Dredging to maintain navigation channels affects the hydrology of the river channel and disturbs the channel bottom. It can increase the velocity of the current and the movement of suspended sediments which can scour the bottom and shoreline. Dredging also disturbs sediments that may contain toxic substances that can be harmful to plants and animals. Before dredging, the Corps typically tests for the presence of contaminants.

Additionally, Appendix M of the Feasibility Study EIS, the Fish and Wildlife Coordination Act report, Section 6.1.2.5 Operation at Minimum Operating Pool (MOP)+1 foot (0.3048 m) discusses dredging. The lower Snake River pools have often been operated at the MOP+1 foot (0.3048 m) elevation to provide additional depth for navigation. This has occurred at Lower Granite, Ice Harbor, and Little Goose reservoirs. The Corps has prepared an environmental assessment for dredging of shoals in the Lower Granite and Little Goose pools to provide the

authorized navigation depth of 14 feet (4.3m). This dredging would allow operation of these pools at MOP. Under the Existing Conditions alternative, this operation would continue until shoaling in the navigation channel again required dredging. Dredging is also discussed in Section 12.1.1.3 Reduction of Predator Habitat.

Dredging has been proposed at several locations in the lower Snake River reservoirs to restore authorized navigation depths. The USFWS has previously recommended to the Corps that dredged material be placed on riprapped areas. This would reduce available smallmouth bass habitat and provide more shallow sand bottomed habitat for fall chinook, as well as potential sites for establishing riparian vegetation. The Corps should investigate the placement of dredged material at selected riprapped shoreline sites. It would likely have to include some vegetation establishment, erosion control matting, or other measures to protect portions of the sites from wave erosion.

Even though the Feasibility Study does discuss costs and environmental impacts, the specifics and details of future dredging operations are analyzed in this Final DMMP/EIS.

Organization
Save our Wild Salmon Coalition
Comment 37
Thus, just like NEPA, the CWA requires the Corps to conduct a comprehensive analysis of the impacts of dredging and levee construction before those projects may proceed. The Corps' failure to do so in this EIS therefore not only violates NEPA, but also the CWA. Only with knowledge in hand can the agency determine what best serves they public interest. This EIS does precisely the opposite.
Response
An assessment of water quality impacts has been included in Section 4.9 of the DMMP/EIS. Throughout implementation of the DMMP, the Corps will comply with applicable water quality regulations and consult with water quality regulatory agencies. The impacts of each dredging activity will be evaluated in accordance with sampling and monitoring plans developed specifically for each dredging site. Each proposed dredging activity and levee construction will be reviewed by appropriate water quality regulatory agencies as part of the Clean Water Act 401 certification process.

Organization
Save our Wild Salmon Coalition
Comment 38
The Corps must evaluate impacts pursuant to EPA's 404 (b) (1) guidelines, 40 C.F.R 230. These guidelines require, among many other things, the Corps to determine that an action will not "cause or contribute to significant degradation of the waters of the United States".
Response
A programmatic Section 404(b)(1) evaluation is included in Appendix I of the final DMMP/EIS, and a 404(b)(1) evaluation for the proposed 2002-2003 dredging is included in Appendix N. The Corps will design proposed dredging and disposal activities to avoid or minimize adverse impacts to water quality. For each separate dredge activity the impacts will be evaluated in accordance with sampling and monitoring plans developed specifically for each dredging site. Each proposed dredging activity will be reviewed by appropriate water quality regulatory

agencies as part of the Clean Water Act 401 certification process. The assessment will ensure that any dredged material management activity will not cause or contribute to significant degradation of the waters of the United States.

Organization
Save our Wild Salmon Coalition
Comment 39
SOS reserves the right to offer comment on that document when it is released and hereby incorporates its comments on that document here. Regardless of the flaws in its NEPA analysis, SOS urges the Corps to conduct its 404 (b) (1) analysis to include the rigorous evaluation required by the CWA so that the public and the decision maker may evaluate the Corps' proposal based on a full and accurate accounting of its impacts.
Response
See responses to comments 37 and 38 above.

Organization
Save our Wild Salmon Coalition
Comment 40
The BA fails to provide an adequate basis for meaningful consultation with the NMFS, violating the ESA and its implementing regulations. Unfortunately, the poor analysis of the actions proposed, the conclusory statements,and lack of a cumulative effects inquiry in this BA falls far short of the ESA's requirements for biological assessments. The BA is largely a regurgitation of the DEIS, with no additional analysis of the potential impacts to listed salmonids.
Response
National Marine Fisheries Service has issued its Biological Opinion based upon the BA. The biological assessment has satisfied NMFS' needs to make an informed decision on the actions that were proposed, consistent with the requirements of the Endangered Species Act.

Organization
Save our Wild Salmon Coalition
Comment 41
In addition, the baseline of the current habtat for listed salmonids in the project area is not discussed. A thorough discussion of the impacts of current management practices is a necessary and useful starting point for an adequate BA.
Response
Section 3 (Affected environment) of the DMMP/EIS discusses the history and nature of the study area ranging from sediment quality to species present to water quality. In addition, Appendix K discusses the habitat preference of fall chinook salmon. Appendix F, Plate F-1 indicates the general depths of the disposal locations. Knowing the depths and substrate preferred by fall chinook, the depths of the proposed disposal areas, and the estimated deposition of silt in the lower reservoir, it is understood that the current conditions in the downstream reaches of the Lower Granite Reservoir are not conducive for the preferred rearing habitat for fall chinook. Any improvements that can be made to improve habitat diversity and mimic what existed prior to inundation will benefit the fish using Lower Granite Reservoir.

Organization
Save our Wild Salmon Coalition
Comment 42
The DEIS and the BA fail to fully address the degradation of critical habitat associated with dredging. The BA largely dismisses critical habitat considerations, however, simply because listed species will (for the most part) not be present in the area during dredging. See App. F, F-34. The presence or absence of listed species, however, is hardly the only relevant factor to consider in a critical habitat analysis.
Response
Critical habitat is discussed in Appendix K. The primary dredging areas are in the main channel near the confluence of the Snake and Clearwater rivers. Although most endangered or threatened salmonids use this area primarily as a migratory corridor, some fish including fall chinook and steelhead may rear in this area year round. However, because most of the proposed dredging area is in the main channel of the river, fewer fish use this area as rearing habitat, as most habitat preferences are oriented along shorelines. Because most shoreline areas are not intended for dredging, but are intended for habitat creation by disposal, the DMMP/EIS indicates that beneficial use of dredged material will have a net benefit on critical habitat for fall chinook. The National Marine Fisheries Service indicates, "The NMFS has determined that the effects of the proposed actions will not jeopardize the continued existence of endangered SR sockeye, threatened SRF chinook, threatened SRSS chinook, threatened SRB steelhead, endangered UCRS chinook, endangered UCR steelhead, or threatened MCR steelhead or result in the adverse modification or destruction of their Critical Habitat. The determination of no jeopardy is based upon the current status of the species, the environmental baseline for the action area, and the effects of the proposed actions."

Organization
Save our Wild Salmon Coalition
Comment 43
Further, there is a dearth of analysis on the over-wintering of sub-yearling fall chinook in the impacted area or fall chinook spawning in the tailraces that will be dredged.
Response
Fall chinook life history and occurrence in the project area is discussed in detail in Section 3.1 of the DMMP/EIS, in Appendix F, pages F41-44 and in Appendix K, pages K3-7. Research from regionally recognized experts has been cited on more than 20 instances. Spawning in the tailraces of the dams was studied for 4 years, determining where spawning was possible and if fish were spawning in those locations. Fall chinook typically rear along shorelines, and mainstem channel dredging is not expected to impact these fish. However, Easterbrooks found subyearling chinook in the backwaters of McNary Reservoir during the late-winter and early-spring (1995). It is not known if there will be any impact to fish using boat basins or irrigation intakes. These areas are typically not preferred by subyearling chinook based on velocity and substrate characteristics. As part of the monitoring plan outlined in the NMFS Biological Opinion for the DMMP, one of the reasonable and prudent measures under section C.2.5, includes examining the backwater habitats in the proposed dredging areas prior to dredging to determine the spatial and temporal distributions of rearing salmonids, and habitat use. However, in the BA the Corps has stated that dredging and dredged material management will likely adversely affect fall chinook because of these data collected by the state of Washington.

Organization
Save our Wild Salmon Coalition
Comment 44
The document (DEIS) minimizes or ignores much of the guidance outlined in these documents (recent documents serving as a basis for salmon recovery in the Columbia Basin) This is especially clear in respect to the Federal Caucus' document, "Conservation of Columbia Basin: Salmon Recovery Strategy." The DEIS ignores the issue of sustainability.
Response
The consistency with the Salmon Recovery Strategy is included in the habitat efforts covering three areas: tributary streams; the estuary; and the mainstem rivers. Efforts to improve habitat in the mainstem rivers include creating habitat areas for fish. While dredging is not expected to negatively impact the Critical Habitat for endangered species (NMFS Biological Opinion 2002), it is expected to increase habitat for fall chinook. This technique, backed up by many years of research dating back to 1986, and a Reasonable and Prudent Measure in the BIOP to examine the continued viability of test disposal sites and newly created disposal sites, is directly in accordance with the Salmon Recovery Strategy.

Organization
Save our Wild Salmon Coalition
Comment 45
In the Corps' analysis of the socio-economic effects of the proposed dredging, there is no analysis of the costs to the fishing communities for going ahead with this project. Section 4.g at p.51. A complete analysis would include effects to both local sportfishing and down river commercial fishing communities.
Response
The proposed action, which includes the proposed beneficial use of dredged materials and the measures outlined in NMFS' Biological Opinion, would not significantly impact anadromous fisheries (see Appendix F). Dredging and dredged material management, as proposed in the DMMP, would have temporary, minor effects on fish resources, and may have notable benefits to anadromous fishes through creation of favorable habitats. In addition, maintaining boat basins would allow for continued boat-based recreational fishing.

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Appendices

A ☐	E ☐	I ☐	M ☐
B ☐	F ☐	J ☐	N ☐
C ☐	G ☐	K ☐	
D ☐	H ☐	L ☐	

DMMP Comment

1 Dear Sir,
Why cant the dredged material be placed on the North side of Chief Timothy State Park. It would utilize that side of the Park for Boaters and swimmers. There is currently no beaches on the water from Clk to the dam. With the exception on the man-made island, which was made by dredging.
Thank you
Mark Babino

O-133

Commenter
Mark Babino
Comment 1
Why can't the dredged material be placed on he North side of Chief Timothy State Park?
Response
The river channel by Silcott Island (at Chief Timothy State Park) is already constricted by the presence of the island. Adding fill material in this area would further constrict the channel and may contribute to higher water surface profiles upstream in both the Snake and Clearwater rivers at Lewiston. This could increase the chance of flood damages if floodwaters approach the top of the Lewiston levees during high runoff flood events. Additionally, dredged material deposited on the north side of the island would be subject to higher velocity flow conditions and would not stay in place unless it were protected by riprap or a cobble blanket.

Draft Dredged Material Management Plan and
Environmental Impact Statement
McNary Reservoir and
Lower Snake River Reservoirs

COMMENT CARD
(PLEASE PRINT)

(MR./MRS./MS.) LARRY J. GANNON
FIRST NAME INITIAL LAST NAME

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CITY, STATE ZIP RICHLAND, WA 99352

FIRM, ORGANIZATION OR AGENCY REPRESENTED SELF

PHONE NO. (optional) 509-943-1765 DATE 12/12/01

REMARKS:

ON OTHER SIDE

(CONTINUE ON OTHER SIDE)

O-135

DEPARTMENT OF THE ARMY
WALLA WALLA DISTRICT CORPS OF ENGINEERS
C/O DREDGED MATERIAL MANAGEMENT PLAN
201 NORTH THIRD AVENUE
WALLA WALLA WA 99362-1876

US Army Corps of Engineers

REMARKS: (Continued)

Remarks on the Draft Dredged Material Management Plan for the lower Snake River Reservoir

For some time I've thought that there may be areas along the Snake River Reservoirs where it could/would be feasible/practical to develop small streams beds a few hundred yards long up a half mile or so along the edge of the reservoir and supply water for the streams from low lift pumps or water piped from the dams. The streams could provide fish habitat and for natural reproduction areas for steelhead and salmon.

I attended the Corps of Engineers presentation of the DDMMP at Columbia Basin College on Dec 12th, 2001 where I talked with Jack Sands, Steve Fink, and Julie Davin. They were very courteous and knowledgeable. I asked them if they were aware of any consideration of using the dredged material to form small stream beds along the sides of the reservoirs. They said they were not aware of any considerations for such possibility, and that it would obviously be more costly to dump the dredged material above the reservoir level but that it may merit consideration from a fish habit standpoint.

1 I suggest/request that forming small stream beds along the reservoir, either on the existing shore line or using the dredged material be considered.

Thanks,
Larry J. Gannon

Larry J. Gannon
1205 Sunset
Richland WA 99352
509-943-1765
ljgannon@3-cities.com
12/12/2001

ps

Commenter
Larry Gannon
Comment 1
I suggest/request that forming small stream beds along the reservoir, either on the existing shore line or using the dredged materid be considered.
Response
This idea has potential and could be considered under the beneficial use of dredged material, primarily the cobble and gravel that would be removed from the tailrace areas downstream from some of the dams. The best potential may be for spawning channels for Snake River fall chinook. Juveniles of this species typically outmigrate before warm temperatures in the summer could cause problems with fish mortality. The extended periods of rearing for spring/summer chinook, sockeye, coho and steelhead typically require a cooler environment than would be available in the Snake River Canyon.

Artificial spawning channels have been created in various areas of the Columbia River Basin and have had mixed success. An artificial spawning channel was created at the Wells hatchery for summer and fall chinook salmon, but showed very poor results for spawning according to hatchery personnel queried in 1993. However, in the lower Columbia River downstream from Bonneville Dam, there is a man-made spawning channel that is successfully used for spawning by Chum Salmon (WDFW).

One of the major factors affecting the success of salmon spawning is what is known as hyporheic flow, or flow coming up through the gravel, which helps to incubate eggs. (Geist 1998) Where there are natural seeps and springs or through gravel flow (as in the Hanford Reach), adult fish are attracted to those locations for redd building, and high survival of eggs during incubation is thought to be typical. Repeating this in a location where there is not through gravel flow, where artificial flow would have to be engineered, would be a difficult task and possibly cost prohibitive. However, locating a spawning area where water pumps already exist (e.g. an HMU), could reduce costs and may provide a water supply to the artificial channel. In addition, investigations into possible freeze up of these channels during the winter would need to be investigated.

Draft Dredged Material Management Plan and
Environmental Impact Statement
McNary Reservoir and
Lower Snake River Reservoirs

COMMENT CARD
(PLEASE PRINT)

Mr. M Starck Whitehill
MR./MRS./MS. FIRST NAME INITIAL LAST NAME

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None
FIRM, ORGANIZATION OR AGENCY REPRESENTED

509-243-4920 12/17/01
PHONE NO. (optional) DATE

REMARKS: The Anadromous Fish are a great Natural Resource for the Lewiston-Clarkston Community plus the communities Along the Columbia [CONTINUE ON OTHER SIDE]

DEPARTMENT OF THE ARMY
WALLA WALLA DISTRICT CORPS OF ENGINEERS
C/O DREDGED MATERIAL MANAGEMENT PLAN
201 NORTH THIRD AVENUE
WALLA WALLA WA 99362-1876

US Army Corps of Engineers

O-137

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REMARKS: (Continued) River. I fear the dredging project will deter the migration of the up river and down River Steelhead and salmon. the dams have caused enough of a problem and I am opposed to any projects that will Reduce the numbers of these Fish in the Future. Furthermore, I am not convinced the benefits of the dams are worth the problems they create.

US Army Corps of Engineers

Commenter's Name
Patrick Whitehill
Comment 1
I fear the dredging project will deter the migration of the up river and down river steelhead and salmon.
Response
During the dredging operation, the Corps would make every effort logistically possible to avoid salmon and steelhead individuals and runs. Some fish will be difficult to avoid, but the dredging technique that the Corps has proposed (clamshell) has the least potential of capturing fish. The amount of turbidity and contaminants is not expected to be a problem for most fish during the dredging periods. Dredging the channel to a depth of 16 feet is not expected to significantly change the hydraulics around the confluence area and thus not the survivability of adults or juvenile fish as they migrate through. The Corps is not proposing to dredge a bank-to-bank template in an attempt to avoid removing the fish habitat along the shorelines surrounding the navigation channel.

With beneficial use of disposal material and enhancing habitat, the Corps expectsto increase the survivability of salmon smolts as they grow and outmigrate, with the anticipated result of increasing runs of some salmon stocks.